

Sound Basic Education for All

An Action Plan for North Carolina



In collaboration with Learning Policy Institute and
The William & Ida Friday Institute for Educational Innovation

© 2019 WestEd. All rights reserved.

Suggested citation: WestEd, Learning Policy Institute, & Friday Institute for Educational Innovation at North Carolina State University (2019). *Sound Basic Education for All: An Action Plan for North Carolina*. San Francisco, CA: WestEd.

WestEd is a nonpartisan, nonprofit research, development, and service agency that works with education and other communities throughout the United States and abroad to promote excellence, achieve equity, and improve learning for children, youth, and adults. WestEd has more than a dozen offices nationwide, from Massachusetts, Vermont, Georgia, and Washington, DC, to Arizona and California, with headquarters in San Francisco.

Contents

BACKGROUND	1
Introduction	1
About This Action Plan	1
Project Approach	2
Project Methodology	3
Data Sources	6
Structure of This Action Plan	10
The North Carolina Context	11
Background	11
State Efforts to Address the <i>Leandro</i> Requirements	13
Increased Challenges	17
Student Achievement Since the 1997 <i>Leandro</i> Decision	21
North Carolina's Current Education Goals	30
Current Status of <i>Leandro</i> Compliance	31
FINDINGS AND RECOMMENDATIONS	32
Critical Needs to Be Addressed Through This Plan	32

Finance and Resource Allocation	34
Findings	35
Recommendations	50
A Qualified and Well-Prepared Teacher in Every Classroom	52
Findings	53
Recommendations	62
A Qualified and Well-Prepared Principal in Every School	70
Findings	72
Recommendations	83
Early Childhood Education	87
Findings	87
Recommendations	91
High-Poverty Schools	95
Findings	96
Recommendations	103
State Assessment System and School Accountability System	107
Assessment Findings	108
Assessment Recommendations	111
Accountability Findings	114
Accountability Recommendations	118

Regional and Statewide Supports for School Improvement	124
Findings	125
Recommendations	132
Monitoring the State’s Compliance	135
Recommendations	135
INVESTMENT OVERVIEW AND SEQUENCED ACTION PLAN	137
K–12, Early Childhood Education and State-level Infrastructure: Future Investment Overview	154
Recommended Short-term Sequenced Investments in North Carolina K–12 Public Schools and District Operation Budgets	154
Recommended Ongoing Sequenced Investments in North Carolina K–12 Public Schools and District Operation Budgets	157
Recommended Sequenced Investments in North Carolina Early Childhood Education (ECE) Programs	160
Recommended Sequenced Investments in North Carolina State-level Supports	162
CONCLUSION	167
REFERENCES	169

APPENDICES

174

Appendix A. A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K–12 Public Education System

175

Education Funding in North Carolina

175

Approach

178

Findings

179

Conclusions

196

References

199

Appendix B. Developing and Supporting North Carolina's Teachers

200

Context

200

Approach

207

Findings

209

Conclusions

211

References

212

Appendix C. Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations

214

Historical Context

214

Findings: Current Status of Teaching and Leadership in North Carolina

215

Conclusion

228

References

229

Appendix D. Attracting, Preparing, Supporting, and Retaining Education Leaders in North Carolina	230
---	------------

Approach and Methods	230
Findings	231
Conclusions	233
References	234

Appendix E. High-Quality Early Childhood Education in North Carolina — A Fundamental Step to Ensure a Sound Basic Education	235
--	------------

Approach	235
Benefits of Early Childhood Education	236
Early Childhood Education Landscape in North Carolina	237
Findings	238
Conclusions	243
References	244

Appendix F. Providing an Equal Opportunity for a Sound Basic Education in North Carolina’s High-Poverty Schools: Assessing Needs and Opportunities	245
---	------------

Introduction	245
Approach	245
Findings	246
Conclusions	254
References	255

Appendix G. North Carolina’s Statewide Assessment System: How Does the Statewide Assessment System Support Progress Toward Meeting the <i>Leandro</i> Requirements?	256
--	------------

Overview	256
Types of Assessment	257
Approach	259
Findings	260
Conclusions	263
References	265

Appendix H. North Carolina’s Statewide Accountability System — How to Effectively Measure Progress Toward Meeting the <i>Leandro</i> Tenets	266
--	------------

Introduction	266
Findings	267
Conclusions	270
References	271

Appendix I. An Exploration of School Success Factors to Inform the <i>Leandro</i> Action Plan	272
--	------------

Success Factors Framework Overview	272
Research Approach	273
Findings, Organized by Success Factor	274
Conclusion	279
References	279

Appendix J: Costs and Assumptions for Critical Need Areas and Action Items	280
---	------------

References	284
------------	-----

Appendix K: Proposed Allotment and Funding Distribution Changes to Direct More Funding to Students of Need and Promote Flexibility in the Use of Funds	285
---	------------

References	287
------------	-----

List of Exhibits

Exhibit 1. The 13 study reports produced by the <i>Leandro</i> research study teams	3
Exhibit 2. North Carolina educational stakeholders engaged in the study	5
Exhibit 3. Constructs measured by the North Carolina Teacher Working Conditions Survey	8
Exhibit 4. North Carolina achievement trends (eighth grade mathematics)	14
Exhibit 5. Teacher turnover in K–12 traditional public schools, by district (2016–17)	18
Exhibit 6. Percentage of beginning teachers, by low- and high-poverty schools, 2016–17	19
Exhibit 7. Percentage of lateral-entry teachers, by low- and high-poverty schools, 2016–17	19
Exhibit 8. National Board–certified teachers per 100 students, by low- and high-poverty schools, 2016–17	19
Exhibit 9. Proportion of economically disadvantaged students, by local education agency, 2018–19	20
Exhibit 10. Percentage of grade 3–8 students proficient in both ELA and mathematics, 1993–2018 (all students)	22
Exhibit 11. Percentage of grade 3–8 students proficient in both ELA and mathematics, 1993–2018 (by student group)	23
Exhibit 12. NAEP mathematics scores for grade 4 and grade 8 students in North Carolina and nationally, 1992–2017	24
Exhibit 13. NAEP reading scores for grade 4 and grade 8 students in North Carolina and nationally, 1998–2017	25

Exhibit 14. North Carolina NAEP mathematics scores, by student group (1992–2017)	26
Exhibit 15. North Carolina NAEP reading scores, by student group (1998–2017)	26
Exhibit 16. North Carolina four-year graduation rate, by student subgroup (2018)	27
Exhibit 17. Five-year high school graduation rates and measures of postsecondary readiness for non–economically disadvantaged students and economically disadvantaged students (2018)	28
Exhibit 18. 2009–11 high school graduates’ outcomes in postsecondary programs	29
Exhibit 19. 2009–10 high school graduates’ outcomes in postsecondary programs, by EDSs and non-EDSs	29
Exhibit 20. 2009–10 high school graduates’ outcomes in postsecondary programs, by racial/ethnic group	30
Exhibit 21. Student achievement goals in North Carolina’s ESSA plan	31
Exhibit 22. Public education funding by source, FY 2016	34
Exhibit 23. Costs of educating students in poverty	36
Exhibit 24. Map of average district-level North Carolina salary index, 2016–17	37
Exhibit 25. Cost to achieve equivalent outcomes as district enrollment increases	38
Exhibit 26. Disparity in funding between two nearby districts of similar size	39
Exhibit 27. Example of a district with lower funding levels serving students with higher levels of need	39
Exhibit 28. Operating expenditures, 2016–17, adjusted for inflation to July of 2019	42
Exhibit 29. Comparison of Short-term A and Short-term B scenarios phased in over eight-year period	45
Exhibit 30. Short-term C Scenario phased in over eight-year period	46
Exhibit 31. Comparison of current spending versus ongoing A	47
Exhibit 32. Comparison of current spending versus ongoing B	48
Exhibit 33. Additional funding beyond current state spending: Ongoing A and Short-term C implemented over eight-year period	48
Exhibit 34. Teachers credentialed from in-state and out-of-state programs, 2010–11 through 2015–16	54
Exhibit 35. Retention rates in teaching at three and five years’ experience, by teacher preparation pathway	55
Exhibit 36. Average annual K–12 teacher salaries, 2003–2017 (in constant 2017 dollars)	57

Exhibit 37. Funding for original Teacher Compensation and Advanced Roles pilot sites	62
Exhibit 38. Elements of effective principal preparation programs	73
Exhibit 39. Percentage of principals and assistant principals prepared through the seven pathways	76
Exhibit 40. UNC system–prepared principals, 2008–2016	79
Exhibit 41. Annual mean wage of education administrators, elementary and secondary school by state, May 2018	81
Exhibit 42. Annual salaries of teachers and assistant principals, 2018–19	82
Exhibit 43. Counties that declined expansion funds and that are not meeting target of 75% served, 2017–18 and 2018–19	90
Exhibit 44. Fewer fully licensed teachers in high-poverty schools, 2017	98
Exhibit 45. Fewer teachers with advanced degrees in high-poverty schools, 2017	99
Exhibit 46. Fewer National Board–certified teachers in high-poverty schools, 2017	99
Exhibit 47. Experience levels of principals at high- and low-poverty schools	100
Exhibit 48. Ratio of specialized school support personnel to students	106
Exhibit 49. Math, reading, and science proficiency in North Carolina in high-poverty vs. low-poverty schools	116
Exhibit 50. Math, English, biology, and ACT proficiency and graduation rates in North Carolina in high-poverty vs. low-poverty schools	116
Exhibit 51. Growth in math and reading proficiency in North Carolina in high-poverty vs. low-poverty schools	117
Exhibit 52. Identification by counting the number of areas of low performance	122
Exhibit 53. Identification by counting the number of areas of low performance with indicators weighted	123
Exhibit 54. Size of student population in every LEA in North Carolina	125
Exhibit 55. North Carolina counties, by quartile of wealth per average daily membership	126
Exhibit 56. Percentage of each county’s schools that are high-poverty schools	129
Exhibit 57. School performance grades, by percentage of students in poverty	129
Exhibit 58. Recommended short-term sequenced investments and cost estimates in North Carolina K–12 public schools and district operation budgets	155

Exhibit 59. Recommended short-term sequenced investment in North Carolina K–12 public schools and district operation budgets	157
Exhibit 60. Recommended ongoing sequenced investments and cost estimates in North Carolina K–12 public schools and district operation budgets	158
Exhibit 61. Recommended ongoing sequenced investment in North Carolina K–12 public schools and district operation budgets	160
Exhibit 62. Recommended actions and cost estimates for short-term sequenced investments	161
Exhibit 63. Recommended sequenced investment in North Carolina early childhood education programs	162
Exhibit 64. Recommended actions and cost estimates for state-level support investments	163
Exhibit 65. Recommended sequenced investment in North Carolina state-level supports	166
Exhibit A1. Public education funding by source, FY 2016	176
Exhibit A2. Total per-pupil spending by category and overall, 2010–2018	177
Exhibit A3. Distribution of spending by source of funding, 2010–2018	177
Exhibit A4. Allotments intending to address inequities	180
Exhibit A5. Costs of educating students in poverty	181
Exhibit A6. Costs of educating exceptional children	182
Exhibit A7. Costs of educating English learners	182
Exhibit A8. Map of average district-level North Carolina salary index, 2016–17	183
Exhibit A9. Cost to achieve equivalent outcomes as district enrollment increases	184
Exhibit A10. Disparity in funding between two nearby districts of similar size	185
Exhibit A11. District with lower funding levels serving students with higher levels of need	185
Exhibit A12. Operating Expenditures, FY17	190
Exhibit A13. Comparison of Short-term A and Short-term B scenarios phased in over an eight-year period	192
Exhibit A14. Short-term C scenario over an eight-year period	193
Exhibit A15. Comparison of Current Spending versus Ongoing A	194
Exhibit A16. Comparison of Current Spending versus Ongoing B	194
Exhibit A17. Ongoing A and Short-term C implemented over an eight year period	195

Exhibit B1. A comprehensive approach to strengthening the teacher pipeline	200
Exhibit B2. Percentage of teachers identified as Highly Effective (HE) and Needs Improvement (NI), by quartile of economically disadvantaged student population (2016–17)	201
Exhibit B3. Percentage of teachers identified as Highly Effective (HE) and Needs Improvement (NI), by quartile of minority student population (2016–17)	202
Exhibit B4. Percentage of inexperienced teachers, by quartile of economically disadvantaged student population (2016–17)	203
Exhibit B6. Seven key characteristics of effective job-embedded professional learning	204
Exhibit B7. Elements of teacher professional environments	206
Exhibit B8. Constructs measured by the North Carolina Teacher Working Conditions Survey	208
Exhibit B9. District-level average professional environment rating (2015–16)	210
Exhibit C1. North Carolina achievement trends on the NAEP, eighth grade mathematics	214
Exhibit C2. Teachers credentialed in state and out of state, 2010–11 through 2015–16	216
Exhibit C3. Preparation pathways of new teachers, 2009–10 and 2016–17	217
Exhibit C4. Teacher retention rates after three and five years in the field, by teacher preparation pathway	218
Exhibit C5. State annual attrition rates by teacher category, 2017–18	219
Exhibit C6. Projected demand for North Carolina K–12 teachers, by grade level, 2017 to 2026	220
Exhibit C7. Average annual K–12 teacher salaries, 2003–2017 (in constant 2017 dollars)	221
Exhibit C8. Starting teacher salaries and average teacher salaries, 2017–18	222
Exhibit C9. Projections for North Carolina education administrator workforce needs, 2014–2024	225
Exhibit C10. UNC-system-prepared principals, 2008–09 through 2016–17	225
Exhibit C11. Graduates of principal preparation programs, first-year positions and third-year positions	226
Exhibit C12. Percentages of North Carolina public school principals who stayed in their school, by school poverty decile, 2017	226

Exhibit C13. Mean and median salaries for secondary and elementary school principals in southeastern states, 2017	228
Exhibit E1. Counties that declined expansion funds and that are not meeting target of 75% served, 2017–18 and 2018–19	241
Exhibit F1. Percentage of economically disadvantaged students deemed grade-level proficient, 2017	247
Exhibit F2. Percentage of English language learners deemed grade-level proficient, 2017	248
Exhibit F3. Percentage of students with disabilities deemed grade-level proficient, 2017	248
Exhibit F4. Fewer National Board–certified teachers in high-poverty schools, 2017	249
Exhibit F5. Fewer teachers with advanced degrees in high-poverty schools, 2017	249
Exhibit F6. Fewer fully licensed teachers in high-poverty schools, 2017	250
Exhibit F7. More lateral-entry teachers in high-poverty schools, 2017	250
Exhibit F8. Experience levels of principals at high- and low-poverty schools	251
Exhibit F9. Access to services for academically or intellectually gifted students, 2017	251
Exhibit F10. Number of short-term suspensions in relationship to number of reported incidents of misbehavior per 100 students, 2017	252
Exhibit J1. Cost assumptions behind action items included in critical need areas	280
Exhibit K1. Proposed allotment changes to North Carolina’s school funding formula	286

Background

Introduction

Throughout every region of North Carolina, leaders of organizations in all fields — business, education, government, community, faith-based, and others — agree that the future prosperity and well-being of the state's citizens requires successfully educating *all* of its children. That means effectively supporting children of every race and ethnicity, economic level, family background, and location, from the most rural to the most urban. However, North Carolina's current education system fails to meet the educational needs of many of its children and thereby fails to provide for the future success of these individuals, their communities, and the state.

The Supreme Court of North Carolina's decision in *Leandro v. the State of North Carolina* (1997) (*Leandro*) affirmed that the state has a constitutional responsibility to provide every student with an equal opportunity for a sound basic education and that the state was failing to meet that responsibility. As documented in this action plan, the challenges of meeting this responsibility have increased since the original decision, and the state needs to significantly increase its commitment and efforts to provide for the education of every student. To do so, the state will need to strategically improve and transform multiple components of the education system, from ensuring an adequate supply of qualified teachers and principals; to improving curriculum, instruction and assessment; to more effectively addressing the needs of at-risk students and the persistent gaps in achievement among groups of students. A deep ongoing commitment and wise investments are vital to building and maintaining the required capacity at the school, district, regional, and state levels. The future of the state hangs in the balance.

About This Action Plan

This action plan provides recommendations for actions that will advance the state's efforts to achieve compliance with the *Leandro* decision. It identifies the highest leverage and most critical actions that the state needs to take immediately and over the next six years and beyond to transform the education system and provide the necessary foundational opportunities for all students.

The development of the plan is in response to the February 1, 2018, order by Judge W. David Lee for the appointment of:

an independent, nonparty consultant to develop detailed, comprehensive, written recommendations for specific actions necessary to achieve sustained compliance with the constitutional mandates articulated in this [Leandro] case. The consultant will be charged with recommending specific actions the state should take:

- a. To provide a competent, certified, well-trained teacher in every classroom in every public school in North Carolina;*
- b. To provide a well-trained, competent principal for every public school in North Carolina; and*
- c. To identify the resources necessary to ensure that all children in public school, including those at risk, have an equal opportunity to obtain a sound basic education, as defined in Leandro.*

The Defendant State of North Carolina, the Plaintiffs Hoke County Board of Education et al., and the Penn Plaintiff-Intervenors jointly nominated WestEd to serve as the independent consultant, and Judge Lee issued a consent order appointing WestEd to this role on March 7, 2018. With approval of Judge Lee, WestEd arranged for two other independent organizations, the Learning Policy Institute and the Friday Institute for Educational Innovation at North Carolina State University, to also contribute to developing the Leandro Action Plan.

Project Approach


Under WestEd's leadership, the three organizations have collaborated to conduct 13 studies to better understand key issues and challenges related to North Carolina's education system and to inform the recommendations for this action plan. The researchers developed and carried out a comprehensive research agenda to investigate the current state and major needs of North Carolina public education in the following overarching areas: (1) access to effective educators, (2) access to effective school leaders, (3) adequate and equitable school funding and other resources, and (4) adequate accountability and assessment systems. Thirteen research teams each conducted studies related to these four overarching topics and produced 13 research reports (see Exhibit 1). Briefs summarizing each of these studies are included in the appendices.

Exhibit 1. The 13 study reports produced by the Leandro research study teams

Overarching topic	Study report title
Access to effective educators	<ul style="list-style-type: none"> • <i>Best Practices to Recruit and Retain Well-Prepared Teachers in All Classrooms</i> (Darling-Hammond et al., 2019) • <i>Developing and Supporting North Carolina's Teachers</i> (Minnici, Beatson, Berg-Jacobson, & Ennis, 2019) • <i>Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations</i> (Darling-Hammond et al., 2019) • <i>How Teaching and Learning Conditions Affect Teacher Retention and School Performance in North Carolina</i> (Berry, Bastian, Darling-Hammond, & Kini, 2019) • <i>Retaining and Extending the Reach of Excellent Educators: Current Practices, Educator Perceptions, and Future Directions</i> (Smith & Hassel, 2019)
Access to effective school leaders	<ul style="list-style-type: none"> • <i>Attracting, Preparing, Supporting, and Retaining Education Leaders in North Carolina</i> (Koehler, Peterson & Agnew, 2019)
Adequate and equitable school funding and other resources	<ul style="list-style-type: none"> • <i>A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K–12 Public Education System</i> (Willis et al., 2019) • <i>Addressing Leandro: Supporting Student Learning by Mitigating Student Hunger</i> (Bowden & Davis, 2019) • <i>High-Quality Early Childhood Education in North Carolina: A Fundamental Step to Ensure a Sound Basic Education</i> (Agnew, Brooks, Browning, & Westervelt, 2019) • <i>Leandro Action Plan: Ensuring a Sound Basic Education for All North Carolina Students Success Factors Study</i> (Townsend, Mullennix, Tyrone, & Samberg, 2019) • <i>Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities</i> (Oakes et al., 2019)
Adequate accountability and assessment systems	<ul style="list-style-type: none"> • <i>North Carolina's Statewide Accountability System: How to Effectively Measure Progress Toward Meeting the Leandro Tenets</i> (Cardichon, Darling-Hammond, Espinoza, & Kostyo, 2019) • <i>North Carolina's Statewide Assessment System: How Does the Statewide Assessment System Support Progress Toward Meeting the Leandro Tenets?</i> (Brunetti, Hemberg, Brandt, & McNeilly, 2019)

Project Methodology

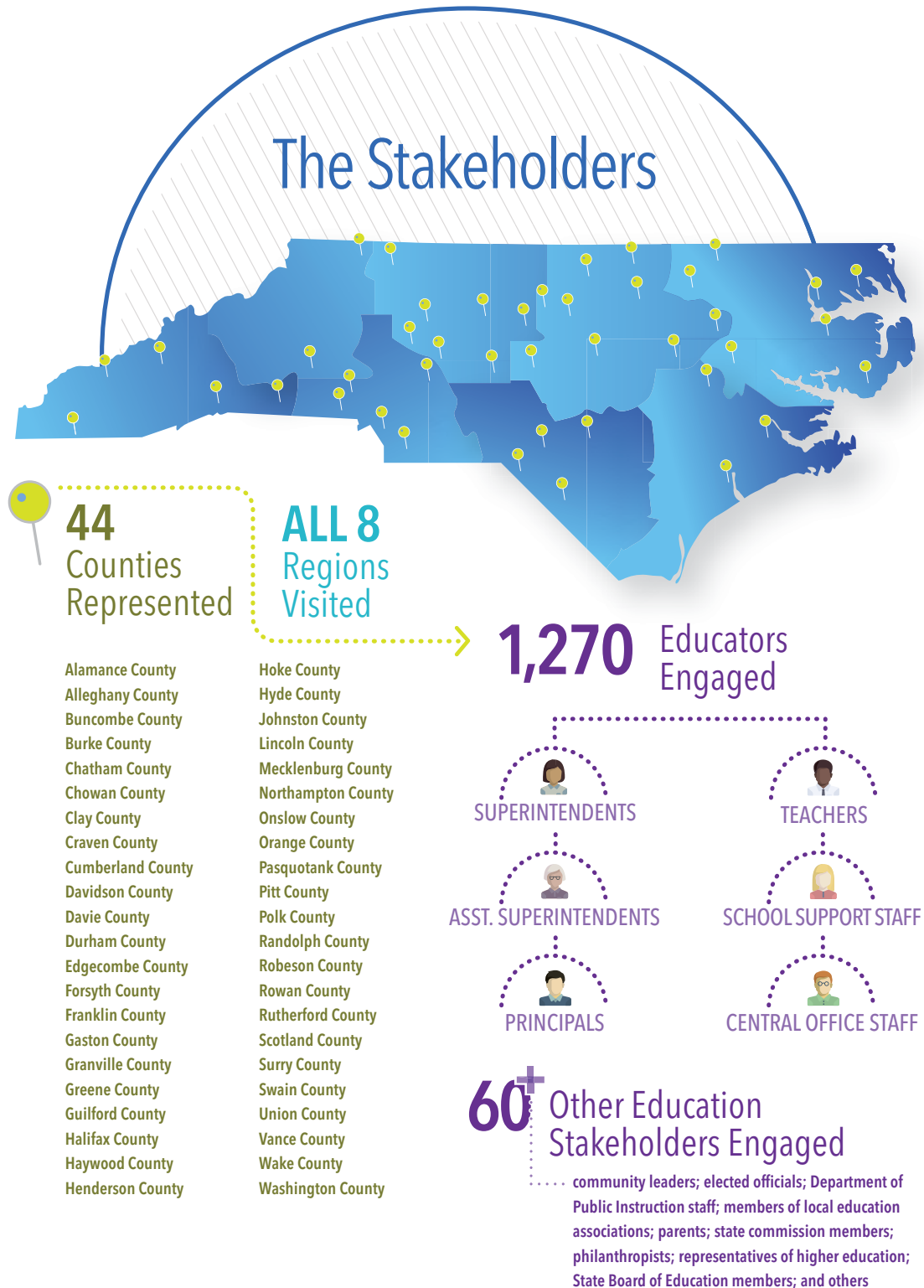
Each of the 13 studies was designed to address specific research questions. The studies used mixed-method designs (see the study briefs in the appendices for the specific questions and methods used in each study). Methods used included the following: analysis of relevant data about student achievement, the education



workforce, school effectiveness, state funding for education, and other areas related to the state's education system; site visits to North Carolina schools and districts; interviews and focus groups with policymakers, school and district administrators, teachers, parents, community members, and students; a statewide survey of all school principals; reviews of relevant research and best practices employed in other states; reviews of prior studies of efforts to improve outcomes in the state; a cost function analysis to estimate the minimum cost necessary to achieve educational outcomes; and professional judgment panels to collect data on educators' perceptions.

Site visits, interviews, and focus groups were designed to maximize engagement with education stakeholders representing the diversity of the state in terms of geography, school level, and school type as well as the characteristics of the student and educator populations. The findings and recommendations are informed by educators and community members in every education region of the state. Exhibit 2 shows the number of educators and other education stakeholders who were interviewed or surveyed for the studies.

Exhibit 2. North Carolina educational stakeholders engaged in the study



The studies all aimed to more deeply understand the North Carolina context in order to inform well-grounded, evidence-based recommendations for actions the state can take to meet the *Leandro* requirements. The primary data sources for all the studies are summarized in the Data Sources section below.

Data Sources

State Data

Since extensive state data are readily available, the researchers relied on several existing data sets as well as previous research for the analysis. Existing data sets used for the studies included the following:

- » The **North Carolina Education Research Data Center** (NCERDC) at Duke University has been housing data on every student, teacher, school, and district in the state since the mid-1990s. Many of these data sets are derived from administrative records collected by the North Carolina Department of Public Instruction (NCDPI), but the NCERDC also houses public-use data sets from other sources, such as the U.S. Census Bureau and the U.S. Department of Education. These data sets include millions of students and teachers with unique identification numbers. We obtained NCERDC data sets from 2006 through the most recently available school year (often 2016–17), which include the following data:
 - *Student and teacher demographics*: race, ethnicity, age, grade, limited English proficiency status, migrant status, homelessness status, free/reduced-price lunch eligibility
 - *School characteristics*: pupil-teacher ratio; counts of students eligible for free/reduced-price lunch; counts of students by race, ethnicity, and grade
 - *School learning opportunities and resources*: per-pupil expenditures, access to materials and technology, access to student support staff
 - *Indicators of educator quality*: educational attainment, licensure type, experience, National Board certification
 - *Indicators of school working conditions*: North Carolina Teacher Working Conditions Survey results, educator salary
 - *Student outcomes*: End-of-Grade and End-of-Course exam achievement and growth, graduation rates, exclusionary discipline experiences
- » The **Education Policy Initiative at Carolina** (EPIC) at the University of North Carolina (UNC) conducts research on educator quality; school effectiveness and equity; and postsecondary readiness, access, and completion. EPIC provided state data on preparation pathways, retention, and mobility of teachers, as well as measures of school leader preparation, experience, supply, and mobility. These data allowed researchers to analyze student access to well-prepared teachers and leaders and also contributed to analyses of learning opportunities for economically disadvantaged students.

- » The **American Community Survey** is an ongoing survey of the U.S. Census Bureau that provides vital demographic, economic, social, and other information on a yearly basis. The survey was used to examine community characteristics in North Carolina.

Principal Survey

The studies also used data from a **survey of North Carolina principals**, developed by the researchers and administered to all principals statewide in fall 2018. The survey included 75 items that addressed the components of a sound basic education. The researchers developed a list of potential items from existing surveys used in other studies or contexts. These surveys included:

- » Illinois 2011 Principal Survey¹
- » Schools and Staffing Survey²
- » TALIS Principal Survey³
- » Survey of California Principals (Learning Policy Institute)⁴
- » National Teacher and Principal Survey⁵
- » Teach for America Survey⁶
- » Pennsylvania Teacher and Principal Evaluation Survey⁷
- » VAL-ED Survey⁸

From a master list of items that addressed the domains and topics of interest, the researchers narrowed the list of survey items and then tested and made final revisions to the survey. The survey was administered via SurveyMonkey to 2,657 principals through an established principal contact list made publicly available by the NCDPI. The survey was open for respondents for five weeks. The total survey response rate was 31% (832 completed survey responses). Survey data was cleaned and then analyzed using statistical software packages STATA and SPSS to generate the descriptive statistics and cross-tabulations required for analysis.

1 https://www.isbe.net/documents/blank_survey_11.pdf

2 <https://nces.ed.gov/surveys/sass/pdf/1112/SASS2A.pdf>

3 <http://www.oecd.org/education/school/43081362.pdf>

4 https://gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Sutcher.pdf

5 https://nces.ed.gov/surveys/ntps/pdf/1516/Principal_Questionnaire_2015-16.pdf

6 https://www.rand.org/pubs/research_reports/RR2192.html

7 <http://www.education.pa.gov/Teachers%20-%20Administrators/Teacher%20and%20Principal%20Evaluation%20Survey/Pages/default.aspx>

8 https://valed.ioeducation.com/pdfs/Sample_Survey.pdf

North Carolina Teacher Working Conditions Survey

Researchers analyzed publicly available data from the biannual North Carolina Teacher Working Conditions Survey. More than 120,000 educators responded to the survey, which was most recently administered in 2018. The survey measures the constructs described in Exhibit 3.

Exhibit 3. Constructs measured by the North Carolina Teacher Working Conditions Survey

Construct	Description
Community support and involvement	Community and parent/guardian communication and influence in the school
Teacher leadership	Teacher involvement in decisions that impact classroom and school practices
School leadership	Ability of school leadership to create trusting, supportive environments and address teacher concerns
Management of student conduct	Policies and practices to address student conduct issues and ensure a safe school environment
Use of time	Available time to plan, collaborate, provide instruction, and eliminate barriers in order to maximize instructional time during the school day
Professional development	Availability and quality of learning opportunities for educators to enhance their teaching
Facilities and resources	Availability to educators of instructional, technology, office, communication, and school resources
Instructional practices and support	Data and support available to teachers to improve instruction and student learning

Source: *The New Teacher Center (2018)*

Equitable-Access Data

The research team conducted an analysis of teacher effectiveness and experience data from the National Center for Education Statistics (NCES), by quartiles of economically disadvantaged students and students of color to determine the extent of inequities in access to “excellent educators.” The North Carolina Every Student Succeeds Act (ESSA) Consolidated State Plan also served as a key source for equitable-access data, given that individual-level overall-effectiveness-status data are not publicly available through the NCES.

Focus Groups and Interviews

The researchers conducted interviews and focus groups with teachers, principals, superintendents, and other district and state professionals. Researchers coded transcripts from 52 interviews, and focus groups conducted during site visits throughout the state. The participants were from eight different districts, four of which were plaintiffs in the *Leandro* lawsuit. The participants included 14 focus groups of teachers, 16 interviews of principals, 13 district-level staff interviews, 2 interviews with superintendents, and 4 interviews with participants from

related organizations, such as the North Carolina Principals and Assistant Principals Association (NCPAPA) and the North Carolina Department of Health and Human Services. The analysis team coded all transcripts from the interviews and focus groups conducted by the project teams during site visits using the qualitative coding software Dedoose.

The researchers also collected and coded other qualitative data from the following sources:

- » Interviews with more than 60 public-sector leaders and stakeholders with in-depth knowledge of the education leadership landscape in the state
- » Interviews with six NCDPI staff members and interviews with seven county-level administrators who oversee assessment and accountability for their districts
- » Focus groups with 50 local school district superintendents, 33 local school board members, and 5 (of the 8) Regional Education Service Alliance directors
- » Three case studies of schools in advantaged and disadvantaged communities
- » Two focus groups of 12 North Carolina school district chief financial officers (CFOs) representing a diverse range of districts and follow-up phone interviews with 7 CFOs

Professional Judgment Panels

The professional judgment panels primarily involved collecting data on educators' perceptions of the most effective allocation of resources with alignment to student need. Discussions included attention to differences in need based on schooling level and various student characteristics. WestEd staff facilitated three in-person professional judgment panels of North Carolina education practitioners — nominated because they were considered exemplary in their position — to ensure diverse representation across multiple measures, including geography, demographics, and practitioner role (e.g., district superintendent, district CFO, principal, teacher). Each group of panelists was presented with a data profile of the “typical” school environment at each schooling level: elementary, middle, and high school. Panelists deliberated on the resources required to achieve a desired set of student outcomes in each environment. Panelists were also asked to determine the necessary resources to serve large populations of economically disadvantaged students and exceptional children.

Cost Function Analysis Data

The data used in this analysis came from administrative and public files of the NCDPI, including data housed and maintained by the Duke University NCERDC. Publicly available data from the NCES, the U.S. Bureau of Labor Statistics, the U.S. Department of Housing and Urban Development, and the U.S. Census Bureau were also used in the analysis. The analysis covered the five-year period from 2012–13 through 2016–17.

Other Extant Data

The researchers reviewed a variety of other extant data, analyzing information included within already-existing documentation of policies and programs and their impact, including data from the following sources:

- » Independent operational assessment of the NCDPI
- » North Carolina ESSA Consolidated State Plan
- » North Carolina State Plan to Ensure Equitable Access to Excellent Educators
- » Outcomes for Beginning Teachers in a University-Based Support Program in Low-Performing Schools
- » Race to the Top Professional Development Evaluation Report
- » Other evaluation reports on teacher and leader preparation programs and educational innovations in the state
- » Presentations from experts made to the North Carolina Governor’s Commission on Access to a Sound Basic Education
- » Manuals and reports published by the NCDPI
- » Publicly available multiyear data from the NCDPI website on district allotments, expenditures, student demographics, and school characteristics
- » North Carolina relevant education legislation

Structure of This Action Plan

This action plan begins by presenting context and background on education in North Carolina and the history of the *Leandro* case. The plan then summarizes findings that describe North Carolina’s current status and challenges in meeting the *Leandro* requirements and provides specific recommendations for action steps the state needs to take in order to meet these challenges.

The North Carolina Context

Background

The Historical Context of Public Education in North Carolina

North Carolina's efforts⁹ to provide a sound basic education for every child date back to the 1868 State Constitution that required the General Assembly to provide "a general and uniform system of public schools, wherein tuition shall be free of charge to all of the children of the State" and established that a Superintendent of Public Education be elected by the people for a four-year term (Etheridge, 1993). Building this system gained momentum in the early 20th century, led by Governor Charles B. Aycock and Superintendent James Y. Joyner, whose efforts resulted in the building of 3,000 schools throughout the state and the enactment of the 1913 Compulsory Attendance Act that required all children from ages 9 through 12 to attend at least four months of school each year.

During the early decades of the 20th century, North Carolina's commitment to public education was evidenced by increasing allocations of state funding to education, creating teacher training institutions for both White and Black educators, establishing the North Carolina State Board of Education under which a Board of Examiners set requirements for teacher certification, lengthening the school year, establishing vocational and agricultural education programs, and more. The commitment was affirmed by the School Machinery Act of 1931, as the state sought to restore its system of public education after the damage caused by the Great Depression. The School Machinery Act, which was refined in 1933, established most of the basic elements that continue to govern North Carolina's public school law today.

As was true throughout the nation, the 1954 U.S. Supreme Court ruling in *Brown vs. the Board of Education of Topeka*, the 1964 Civil Rights Act, and the 1965 Elementary and Secondary School Act together had a major impact on public education in North Carolina, leading to the racial integration of the schools and a major increase in federal involvement and funding for improving schools. The 1960s and 1970s also witnessed in North Carolina the advent of universal kindergarten, the 180-day school year, regional education support agencies, statewide testing, the requirement to provide appropriate educational opportunities for students with disabilities, the establishment of the North Carolina School of Science and Mathematics, the expansion of the UNC system, and many other policies and programs that formed a strong foundation for continued progress of the state's system of public education.

That progress continued during the 1980s and 1990s when, with leadership from Governor James B. Hunt, Superintendent Bob Etheridge, and members of the General Assembly, North Carolina moved its education system forward in many ways. These advancements included establishing a new system of curriculum standards

⁹ Much of the historical information through the early 1990s is based on *The History of Education in North Carolina*, from the North Carolina Department of Public Instruction (Etheridge, 1993).

and assessments, strengthening the teaching profession, increasing funding for education, and implementing other initiatives that led to substantial increases in students' achievement from the early 1990s through the mid-2000s. As a result, North Carolina became widely recognized nationally as a leading state for educational innovation and effectiveness. Although education improvement efforts have continued, resources committed to education decreased during the Great Recession — some valuable programs were discontinued, and, as described later in this report, the challenges of providing every student with a sound basic education increased.

The Economic Imperative

Throughout this history, North Carolina leaders recognized that a strong public education system served both the economic and the social progress of the state. This view has been well documented in research studies that support the wisdom of the state's long-standing commitment to and investment in public education. For each high school graduate, society gains a number of economic benefits, including higher tax revenue and lower government spending on health, crime, and welfare costs. For example, one cost analysis estimated that each new high school graduate yielded a public benefit of \$209,000 in higher government revenues and lower spending, compared with an investment of \$82,000 to help each student achieve graduation (Belfield & Levin, 2007). According to this analysis, the net economic benefit is 2.5 times greater than the cost.

The recent call to action issued by the myFutureNC Commission (2019) highlights the ways that the state's talent supply is not keeping pace with current changes in the job market. For example, the state has experienced significant declines in blue collar work and an increased need for employees to fill skilled service jobs. However, the state is not producing sufficient talent with the technical skills and education to fill these skilled roles. Further, educational opportunities are not being equitably distributed across the state, as far fewer students from more economically disadvantaged backgrounds are earning postsecondary credentials than are their more economically advantaged peers (myFutureNC Commission, 2019). The commission's ambitious goal, to enable two million 25- through 44-year-olds to obtain a high-quality postsecondary credential or degree by 2030, will not be possible without systemic efforts at all levels of the education system. Likewise, the state's goal and obligation to provide all students with a sound basic education that prepares them for future success also necessitates a systemic approach to education improvement.

The Right to a Sound Basic Education

Although North Carolina has had a deep and long-standing commitment to public education to support both the social and the economic welfare of its citizens, the state has struggled with fulfilling this commitment for all of its children. The failure to provide an adequate education to many children led to the *Leandro v. North Carolina* case and the 1997 landmark decision in which the Supreme Court of North Carolina (the Court) unanimously affirmed the following:

[The North Carolina Constitution guarantees] every child of this state an opportunity to receive a sound basic education in our public schools. For purposes of our Constitution, a "sound basic education" is one that will provide the student with at least: (1) sufficient ability to read, write,

and speak the English language and a sufficient knowledge of fundamental mathematics and physical science to enable the student to function in a complex and rapidly changing society; (2) sufficient fundamental knowledge of geography, history, and basic economic and political systems to enable the student to make informed choices with regard to issues that affect the student personally or affect the student's community, state, and nation; (3) sufficient academic and vocational skills to enable the student to successfully engage in postsecondary education or vocational training; and (4) sufficient academic and vocational skills to enable the student to compete on an equal basis with others in further formal education or gainful employment in contemporary society. (Leandro v. State, 1997)

Judge Howard E. Manning Jr. of the North Carolina Superior Court was assigned to monitor the state's compliance with the *Leandro* decision. His actions included requiring the state to set a high bar for the achievement level that would demonstrate a student had obtained a sound basic education; ordering the state to fund preschool programs for at-risk 4-year-old children; ordering the state to intervene directly in the chronically low-performing Halifax County Schools; and requiring the state to provide guidance and support for the turnaround of low-performing schools. He visited schools; met with educators, parents, business leaders, and state policymakers; deeply studied educational issues; analyzed data about every aspect of the state's K–12 system; held hearings; articulated what needed to be done; and, throughout nearly two decades until his retirement in 2015, was a strong and tireless advocate for every child in North Carolina receiving a sound basic education. However, North Carolina, like many other states, has struggled to ensure this basic provision for all of its students. Two decades have passed since the *Leandro* decision guaranteed the right of all North Carolina students to a sound basic education, during which the situation in the state's most disadvantaged schools first improved, then worsened once again. Children of North Carolina deserve better.

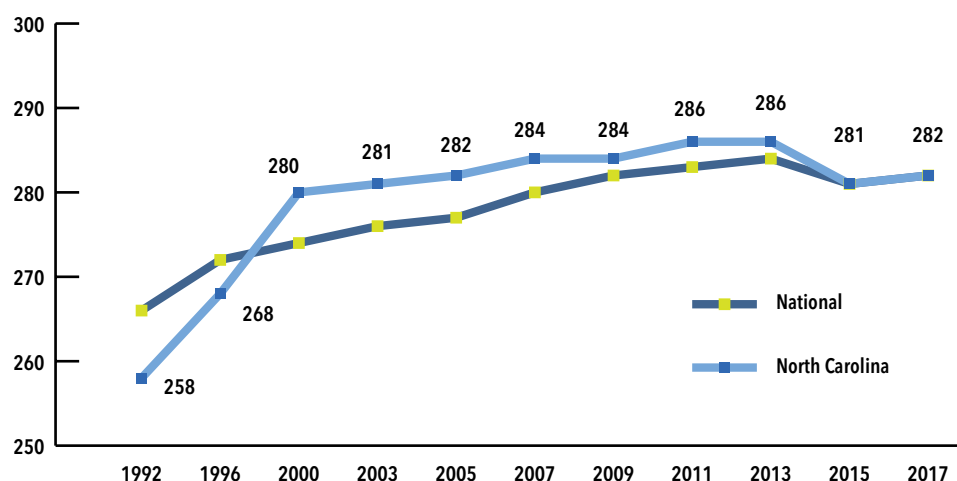
State Efforts to Address the *Leandro* Requirements

North Carolina was recognized during the 1980s and 1990s as an example of how state policymakers could turn a state around by making strong investments in teachers' knowledge and skills and in early childhood support and education and by establishing standards for students and teachers. The state was extensively studied by the National Education Goals Panel when its efforts resulted in sharp increases in student performance and reduction in the achievement gap.

During the 1990s, North Carolina posted the largest student achievement gains of any state in mathematics, and it realized substantial progress in reading, becoming the first southern state to score above the national average in fourth grade reading and math, although it had entered the decade near the bottom of the state rankings. Of all states during the 1990s, it was also the most successful in narrowing the minority-White achievement gap (National Education Goals Panel, 1999). In 2007, it remained the top-scoring southern state in mathematics, ranking on a par with states like Idaho and Maine, which had many fewer economically disadvantaged and minority students. (See Exhibit 4.)

However, cutbacks that began during the recession after 2008, along with much deeper legislative cuts over the last few years, have eliminated or greatly reduced many of the programs that were put in place and have begun to undermine the quality and equity gains that were previously made. Declines in achievement have occurred since 2013 in mathematics and reading on the National Assessment of Educational Progress (NAEP), and achievement gaps have widened.

Exhibit 4. North Carolina achievement trends (eighth grade mathematics)



Source: National Assessment of Educational Progress, 1992–2017

For example, on the NAEP, between 2015 and 2017 the gap between Black and White students in both eighth grade mathematics and reading grew. In math, the gap increased substantially, from 29 to 37 points.¹⁰ In reading, the gap grew from 24 to 28 points as both groups of students declined, but Black students' scores fell further.¹¹

Before these recent cuts, the state made multiple efforts after the 1997 *Leandro* decision to improve education for North Carolina students, in some cases building upon initiatives that predated *Leandro*, but that have since grown and evolved. Many of these initiatives have a particular focus on students who are at-risk of academic failure.¹² Some examples of these efforts, each of which has resulted in positive outcomes, at least for a time, are summarized throughout this section.

10 White students' scores increased from 292 to 295, whereas Black students' scores decreased from 263 to 258.

11 White students' scores fell from 272 to 271, whereas Black students' scores fell from 248 to 243.

12 The Supreme Court of North Carolina defined at-risk students as children "who hold or demonstrate one or more of the following characteristics: (1) member of a low-income family; (2) participate in free or reduced-cost lunch programs; (3) have parents with a low-level education; (4) show limited proficiency in English; (5) are a member of a racial or ethnic minority group; or (6) live in a home headed by a single parent or guardian" (*Hoke County Board of Education v. State*, 358 N.C., 2004, p. 6, section 22). Although students with disabilities were not specifically included in this definition, it is undisputed that such students are entitled to the opportunity for a sound basic education and, like all at-risk students, may require additional resources in order to achieve that opportunity.

Strengthening the Educator Workforce

The Teaching Fellows program recruits and prepares talented individuals to teach in content areas and in geographic parts of the state in which there are shortages of qualified teachers. The Principal Fellows program is designed to address the shortage of qualified principals. Both programs provide merit-based scholarships in return for multiyear commitments to serve in North Carolina schools. Discontinued for a time, the Teaching Fellows program was restarted last year, but at a much smaller scale.

Operating on a small scale, the Transforming Principal Preparation Program, the North Carolina State Education Leadership Academy, and other innovative programs recruit and prepare education leaders to be change agents who can successfully lead the improvement of low-performing schools.

Professional development programs enhance the professional skills of educators, including the New Teacher Support Program for teachers during their first three years in the profession; the many programs for experienced teachers provided by the North Carolina Center for the Advancement of Teaching; the Distinguished Leadership in Practice and Future-Ready Leadership programs for current and future principals provided by the NCPAPA; and other statewide, regional, and district programs. However, all of these programs operate on a small scale. The New Teacher Support Program, for example, supports fewer than 10% of beginning teachers, a much smaller proportion than the statewide mentoring program that reached all beginning teachers in the 1990s.

Preparing Pre-K Students for Success in School

Early childhood programs, including Head Start, Smart Start, NC Pre-K, child care programs and subsidies for low-income families, and services for preschool children who have disabilities support families in preparing young at-risk children to be ready to begin formal schooling successfully when they enter kindergarten. However, funding for these programs has restricted access so that only about 50% of eligible children are able to attend NC Pre-K, leaving almost 33,000 eligible children per year unserved (Barnett, 2019).

Improving the Curriculum and Teaching Practices

The state established rigorous curriculum standards, starting with the ABC's K–8 accountability model implemented while the *Leandro* case was in progress. This was followed by the implementation of more rigorous standards in mathematics in 2005 and in reading in 2007 and by the adoption of even more rigorous standards in 2012, which have since been updated. However, funding for high-quality professional development to support teachers and leaders in implementing the standards has been scarce, so what students are taught is often not what the standards intend.

Read to Achieve and other programs are being used to improve the teaching of critical foundational reading skills to students in the early elementary grades. A useful program, this effort, too, reaches only a small share of the students who could benefit from it.

Supporting the Improvement of Low-Performing Schools

The NCDPI's District and School Transformation unit guided and supported the state's lowest-achieving schools and districts to improve the achievement of their students. However, since 2015, there have been substantial declines in funding and state capacity for school improvement. The prior systems of providing assistance, coaching, and professional development for school turnaround has ended. The current system of support is inadequate for improving low-performing schools.

Providing School Choice and Extended Learning Opportunities for Students

The state established 125 Early College High Schools and other Cooperative Innovative High Schools that provide small schools on college campuses that enable students to complete high school and earn college credits, with no tuition or other costs.

The Career and College Promise legislation enables high school students throughout North Carolina to attend college courses and obtain both high school and college credits, with the state providing funding for college tuition.

Career and technical education (CTE) programs provide many high school students with professional skills and credentials that lead to opportunities in the workplace.

Learning opportunities beyond the school day and walls provide valuable learning experiences for students, including 4H programs, Science Olympiad, Math and Science Education Network programs on college campuses for middle and high school students, and many others from schools, museums, colleges and universities, camps, and other organizations.

Extensive Data Systems to Inform Decisions at All Levels

The state has developed high-quality data systems that enable policymakers, educators, parents, and researchers to track the progress of students; measure the effectiveness of teachers, schools, and districts; assess staffing and working conditions within schools; analyze the impact of programs and legislation; and identify needs that must be addressed. The data systems can be updated and used to track indicators that would demonstrate how the state is meeting its requirement to provide every student with the opportunity to obtain a sound basic education.

Funding to Address Critical Needs

The state has provided some designated funding to school districts to support services for economically disadvantaged students and students with disabilities, Pre-K programs for at-risk students, class-size reduction in the early grades, teacher recruitment and retention, technology infrastructure, and other critical areas relevant to the *Leandro* decision. However, the resources have not been adequate to serve students with greater needs, such as by hiring student support personnel (e.g., counselors and social workers) and to provide academic interventions necessary to increase achievement.

Increased Challenges

The programs and activities described above, along with many other statewide, regional, district, community, and school efforts, have put some promising initiatives in place, but these have neither been sustained nor been brought to scale and are insufficient to adequately address the *Leandro* requirements. In fact, the state now faces greater challenges than ever in meeting its constitutional requirement to provide every student with the opportunity to obtain a sound basic education.

In large part, the increased challenges are driven by the major ongoing technological, social, and economic changes in our society. As globalization and urbanization continue and robotics, artificial intelligence, biotechnology, analytics, social networking, and other fields become more advanced, the requirements to be college-, career-, and civic-life-ready have changed. The Court foresaw that the world for which students must be prepared would continue to change, as the *Leandro* decision's definition of a sound basic education included that it would "enable the student to function in a complex and rapidly changing society ... and compete on an equal basis with others in further formal education or gainful employment in contemporary society." And the original *Leandro* decision also affirmed, "An education that does not serve the purpose of preparing students to participate and compete in the society in which they live and work is devoid of substance and is constitutionally inadequate" (*Leandro v. State*, 1997).

Updates to Standards and Assessments

In response to these changes, North Carolina has significantly revised its core curriculum standards and assessments several times. The state updated the mathematics standards prior to the 2005–06 school year and the English language arts standards prior to 2007–08 and then updated both again for 2013–14. Each of these updates aimed to make the standards more rigorous, to reflect what is required to prepare students for success in the increasingly technological and complex society, and to make North Carolina's standards more comparable with those of other states and countries whose students perform well on national and international assessments. As a result, the bar for meeting proficiency has been raised in ways that are necessary and appropriate, but that also increase the challenges for schools in preparing students to achieve proficiency.

Although the state has adopted more rigorous standards, there has not been adequate state investment in and leadership for implementing the standards and providing the professional learning, instructional materials, and other supports needed to change practice in schools and classrooms.

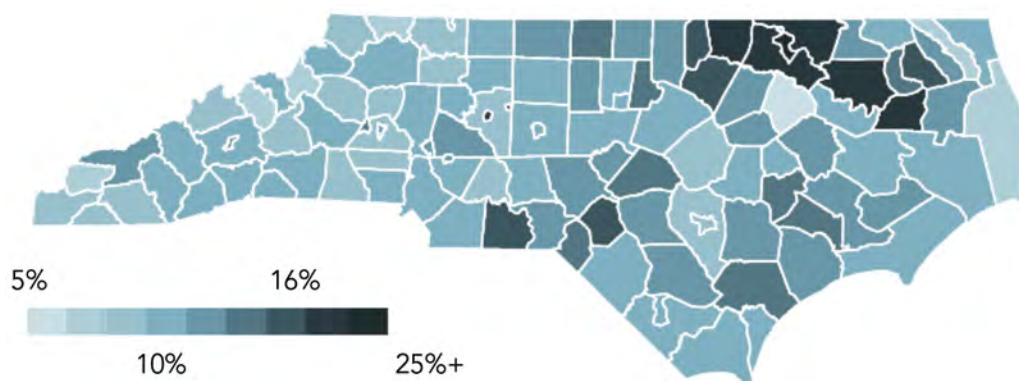
Shifts in the Educator Workforce

The *Leandro* requirements defined by the Court include the need to have a qualified teacher in every classroom. The challenges of fulfilling this requirement have increased over the years. Social and economic changes are impacting the education workforce, leading both to fewer young people choosing teaching as a profession and to fewer of those who do enter teaching remaining in the profession past the first few years. For example, enrollment

in traditional teacher education programs declined by more than 50% between 2008–09 and 2015–16. Likewise, the number of teacher credentials issued between 2011 and 2016 declined by 30% (Darling-Hammond, 2019).

As described in a research paper on educator workforce supply, demand, and quality prepared for this project, budget cuts have reduced the total number of teachers employed in North Carolina by 5% from 2009 to 2018, even as student enrollments have increased by 12%. These cuts have also resulted in stagnating salaries that have placed North Carolina far below national benchmarks and teacher salaries in the Southeast region most of the last decade. There are even more pointed and ongoing struggles with recruiting and retaining qualified teachers in high-poverty schools, with some of the rural districts losing more than 20% of their teachers in a single year, as shown in Exhibit 5. The state reported 1,621 teacher vacancies — a consequence of declining supply and high turnover — that could not be filled by qualified teachers during 2017–18, with the greatest number of vacancies in positions for teachers of exceptional children at all levels, elementary school teachers, math teachers, and career and technical educators.

Exhibit 5. Teacher turnover in K–12 traditional public schools, by district (2016–17)

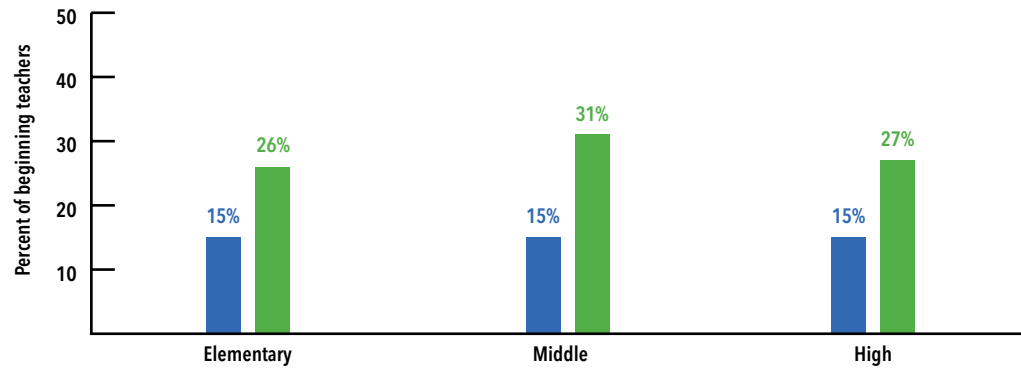


13.5% State Average Teacher Turnover in 2016–17

Source: North Carolina Department of Public Instruction (2018c)

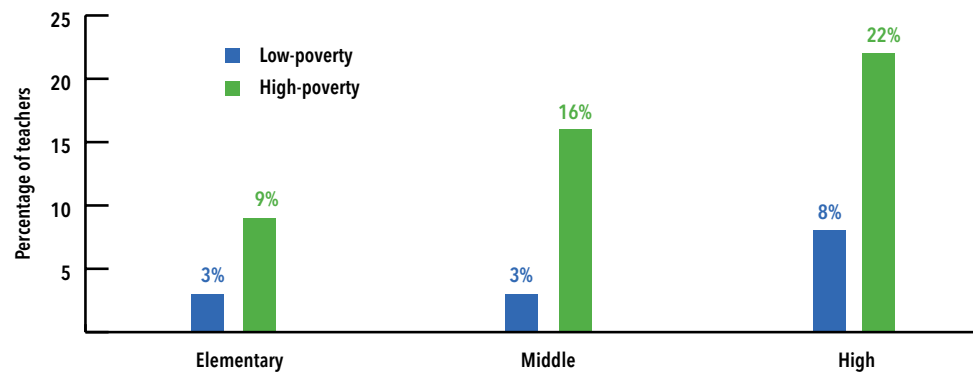
The challenge of having a qualified teacher in every classroom is exacerbated by the inequitable distribution of teachers. Data that compare high-poverty schools, defined as those in which at least 75% of the students are eligible for free or reduced-price lunch programs and are therefore classified as economically disadvantaged students (EDSs), with low-poverty schools, defined as those with no more than 25% EDSs, clearly shows this inequitable distribution. High-poverty schools have far more beginning teachers (Exhibit 6), far more lateral-entry teachers (Exhibit 7), and far fewer National Board–certified teachers (Exhibit 8). Teachers who are insufficiently prepared are more likely to leave teaching, and more of these teachers are hired into high-poverty schools, which most need a stable, experienced workforce.

Exhibit 6. Percentage of beginning teachers, by low- and high-poverty schools, 2016–17



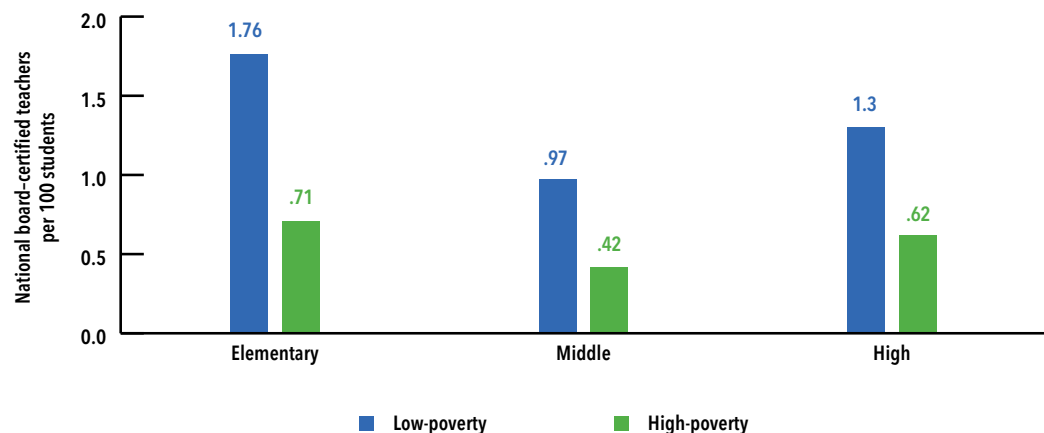
Source: Learning Policy Institute analysis of 2017 NCDPI data

Exhibit 7. Percentage of lateral-entry teachers, by low- and high-poverty schools, 2016–17



Source: Learning Policy Institute analysis of 2017 NCDPI data

Exhibit 8. National Board–certified teachers per 100 students, by low- and high-poverty schools, 2016–17



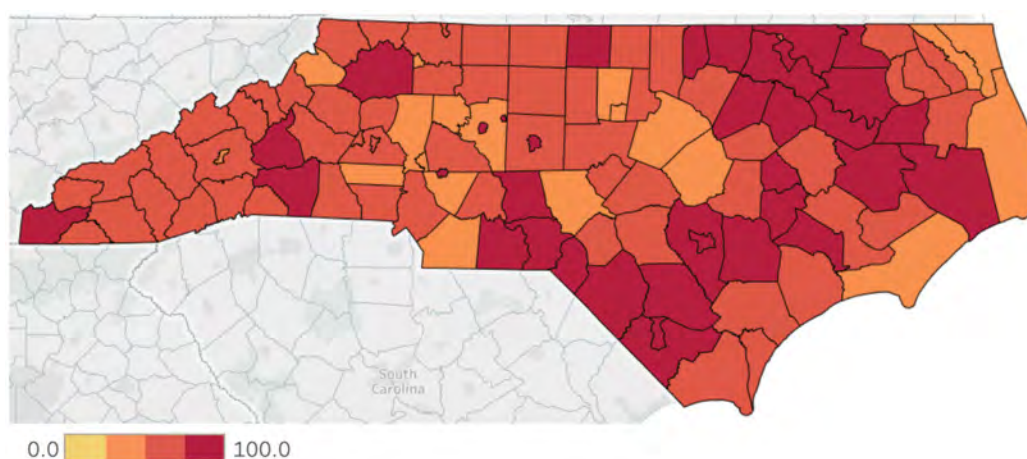
Source: Learning Policy Institute analysis of 2017 NCDPI data

State Investments Not Keeping Pace With Education Needs

Educating today's students to meet high standards and to be successful in this century requires new investments in instructional tools and technology and the educator workforce and greater access to educational opportunity for all. Since the *Leandro* decision in 1997, the requirements for a sound basic education have increased, as reflected in the multiple updates made to the state curriculum standards in response to the changing requirements for success in college and the workplace. In addition, there has been a reduction in the education workforce and increased challenges in attracting and retaining qualified teachers. In the last two decades, North Carolina's public school student population has also grown by about 25% overall, and the number of children with higher needs, who require additional supports to meet high standards, has increased significantly.

The number of economically disadvantaged students (those eligible for free or reduced-price lunch programs) in public schools has grown from 470,316 in 2000–01 to 885,934 in 2015–16, an 88% increase over 15 years. The increase of economically disadvantaged students by more than 400,000 is the result of the overall growth in the student population, combined with the significant increase in the proportion of students who are economically disadvantaged, from 39% in 2000–01 to 57% in 2015–16 (National Center for Education Statistics, 2018). The proportion of economically disadvantaged students is especially high in many of the economically distressed rural districts, as shown in Exhibit 9.

Exhibit 9. Proportion of economically disadvantaged students, by local education agency, 2018–19



Source: North Carolina Department of Public Instruction (2019)

The number of students who are English learners more than doubled over 15 years, increasing from 44,165 (3% of all students) in 2000 to 102,090 (7% of all students) in 2015 (National Center for Education Statistics, 2017). The increased diversity of the student population and the increased number of English learners drive the need to invest further in developing an educator workforce that employs culturally responsive teaching approaches in order to successfully educate all of the state's students.

State funding for education has not kept pace with this growth, and the state does not currently provide adequate resources to ensure that all students have the opportunity to meet higher standards and become college and career ready. As of fiscal year (FY) 2017, the most recent year for which national rankings are available, North Carolina's per-pupil spending was the sixth lowest in the nation (U.S. Census Bureau, 2019). When adjusted to 2018 dollars, per-pupil spending in North Carolina has declined slightly overall, about 6% since 2009–10. Strategic investments to get and keep children on track to meet challenging education standards, including investing in high-quality early childhood education, are essential.

As a result of these many changes, the challenges involved in meeting the *Leandro* requirements have become greater and more complex since the original decision more than 20 years ago.

Student Achievement Since the 1997 *Leandro* Decision

Academic Proficiency of Students in Grades 3–8

Given the efforts that have been made to address the *Leandro* requirements and the increased challenges to doing so, an important question is: What progress has North Carolina made toward providing every student with an equal opportunity to receive a sound basic education?

Judge Manning accepted that the state's curriculum standards and achievement tests were constitutionally adequate to inform the determination of whether students were receiving a sound basic education, and he carefully analyzed the student assessment data each year. Following his lead, the independent consultants examined the pattern of North Carolina students' test performance in the years since the 1997 *Leandro* decision to consider what progress has been made.

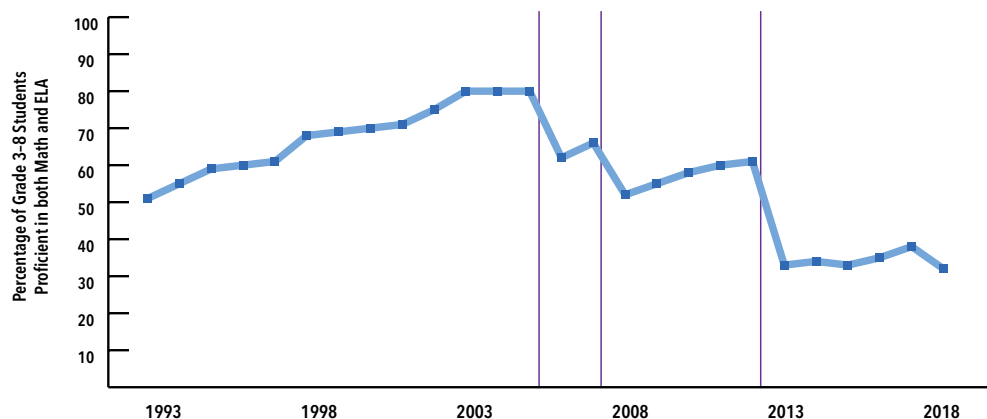
Achievement on North Carolina End-of-Grade Tests

Exhibit 10 shows the percentage of North Carolina's grade 3–8 students who were at or above the proficiency level both in English language arts (ELA) and in mathematics on the North Carolina End-of-Grade (EOG) tests¹³ for each school year from 1993¹⁴ through 2018. The vertical bars show when curriculum standards and assessments were made more rigorous — before the 2005–06 school year for mathematics, before the 2007–08 school year for ELA, and then again before the 2013–14 school year for both subjects. These increases to the rigor of the assessments explain why the percentage of proficient students decreased significantly with each change.

13 "End-of-Grade tests" refers to testing in grades 3–8.

14 In this section, we use the calendar year in which each school year ends, since that is when the End-of-Grade assessments were conducted (e.g., 1993 scores would reflect assessment of students' learning during the 1992–93 school year).

Exhibit 10. Percentage of grade 3–8 students proficient in both ELA and mathematics, 1993–2018 (all students)



Source: North Carolina Department of Public Instruction, *Historical Trends and Results* (n.d.)

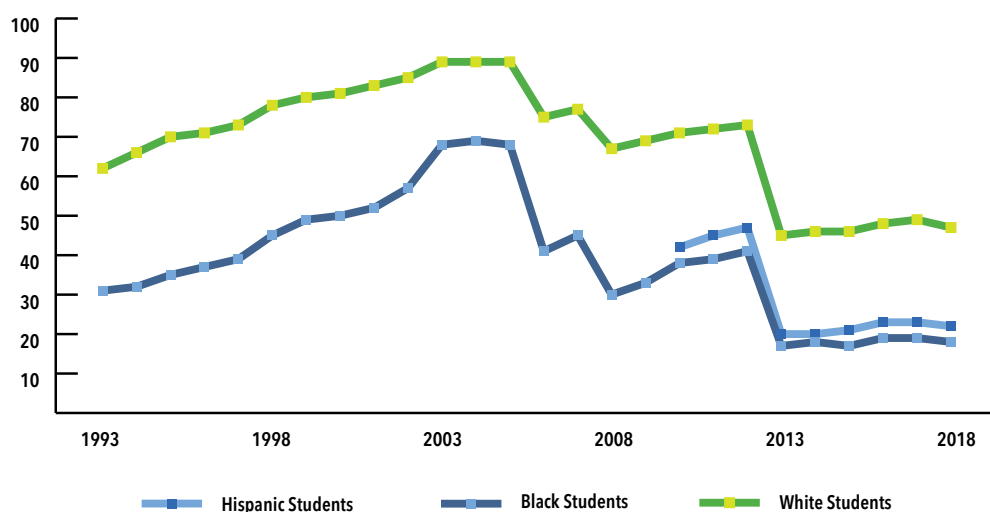
As shown in Exhibit 10:

- » From 1993 through 2005, North Carolina students showed ongoing progress, with the percentage of students proficient in both subject areas increasing from 52.9% to 80.9%, an average gain of 2.33% per year and a strong increase of 28% over the 12-year period.
- » The percentages of proficient students dropped from 2006 to 2008, when first the mathematics and then the ELA standards and assessments were made more rigorous. However, the percentages then showed an 8% increase from 2008 through 2012, an average gain of 2.0% per year.
- » The standards and assessments were again made much more rigorous before the 2013–14 school year assessments, and immediately after that change, the percentage of students reaching proficiency in both subjects dropped from 60.6% to 33.5%.
- » There has not been significant growth in the percentage of proficient students since 2013, with only a 0.8% increase over the five years from 2013 through 2018, an average gain of 0.16% per year, which is less than one tenth per year of previous gains.
- » With the current standards and assessments in place for the past six years, only about one third of the state’s students in grades 3–8 reached proficiency in both of the two most critical curriculum areas, and about two thirds failed to reach proficiency in one or both.

Exhibit 11 disaggregates the data on grade 3–8 students’ proficiency in both mathematics and ELA for White, Black, and Hispanic students (the data for Hispanic students has been available only since 2010). This graph shows the persistent historical achievement gaps. In every year, the percentage of Black and Hispanic students reaching

proficiency is substantially less than the percentage of White students, with the three groups showing similar patterns of increased, unchanged, or decreased percentages proficient through the years.

Exhibit 11. Percentage of grade 3–8 students proficient in both ELA and mathematics, 1993–2018 (by student group)



Source: North Carolina Department of Public Instruction, *Historical Trends and Results* (n.d.)

During the 12-year period from 1993 through 2005, when the overall percentage of proficient students increased steadily, there was also some decrease in the achievement gap between Black and White students, dropping from 33.3% to 21.8%, about a 1% change per year. These improvements were achieved through policy decisions and investments made to enhance the educator workforce and improve schools. However, these investments were not sustained. The achievement gap has increased with each change to more rigorous standards, rather than continuing to close. Specifically, the proficiency gap between Black and White students was 29.9% in 2013, the first year the current standards were implemented, and remained at 30.2% in 2018. The gap between Hispanic and White students has increased slightly during this period, from 22.8% in 2013 to 24.6% in 2018. Reducing these gaps by having substantially more Black and Hispanic students reach proficiency would demonstrate progress toward meeting the *Leandro* requirements, but the data show there has been no such progress, nor has there been significant investment in the resources and supports needed to address the gaps.

In summary, with the advent of more rigorous curriculum standards and assessments to meet current educational requirements, far fewer elementary and middle school students are reaching the proficient level than were reaching the proficient level before the standards were revised. Most important, during the six-year period since the current curriculum standards were implemented, North Carolina has shown almost no progress in the proportion of students achieving proficiency in both ELA and mathematics in grades 3–8 and no progress at all on reducing the achievement gaps of Black and Hispanic students compared with their White peers.

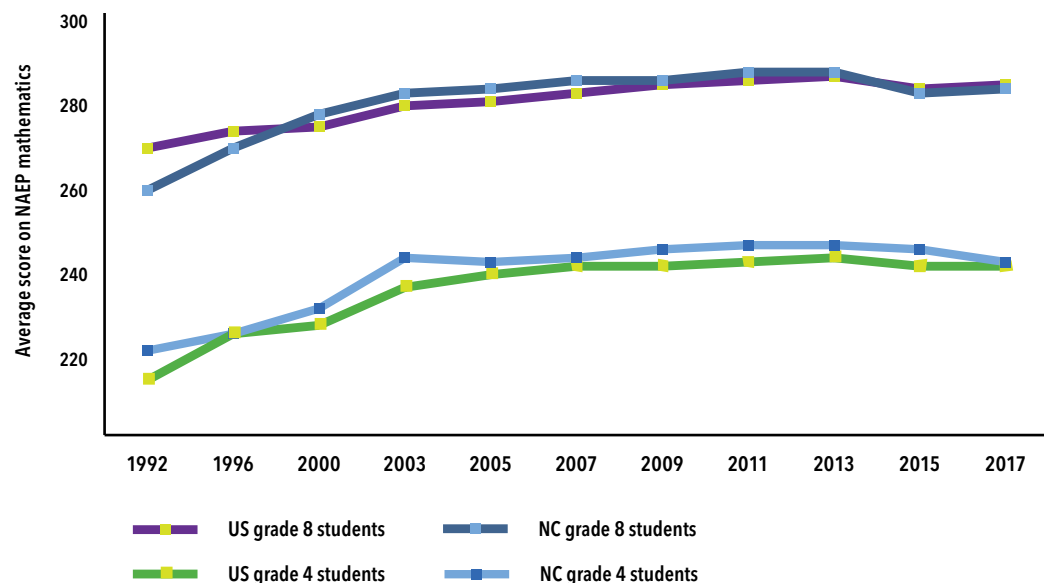
Achievement on the National Assessment of Educational Progress

The lack of progress in improving the percentage of proficient students and in closing the achievement gap is further verified by data from the NAEP. Also known as the nation's "report card," the NAEP is administered to representative samples of students in each state. NAEP data have the advantage of providing consistent, comparable information across years and of enabling a comparison of North Carolina students with those in other states and across the nation. The NAEP mathematics and reading assessment for grades 4 and 8, which have been administered every two years since 2003, and less frequently before then going back to 1990, enable a cross-check of the North Carolina EOG assessment data described above.

Exhibits 12 and 13 compare the average NAEP scores of North Carolina students at grades 4 and 8 with the national averages, with mathematics reflected in Exhibit 12 and reading reflected in Exhibit 13.

In mathematics, the 1992 to 2003 data for both grades show steady increases for North Carolina students — 28 points at grade 4 and 24 points at grade 8. As a result, North Carolina students at both grades advanced from below to above the national average in NAEP mathematics scores during this time period. However, the gains did not continue past 2003, with the average scores at both grades 4 and 8 on the 2017 assessments being within 1 point of the 2003 results, placing North Carolina students within 1 point of the national average in mathematics at each grade.

Exhibit 12. NAEP mathematics scores for grade 4 and grade 8 students in North Carolina and nationally, 1992–2017

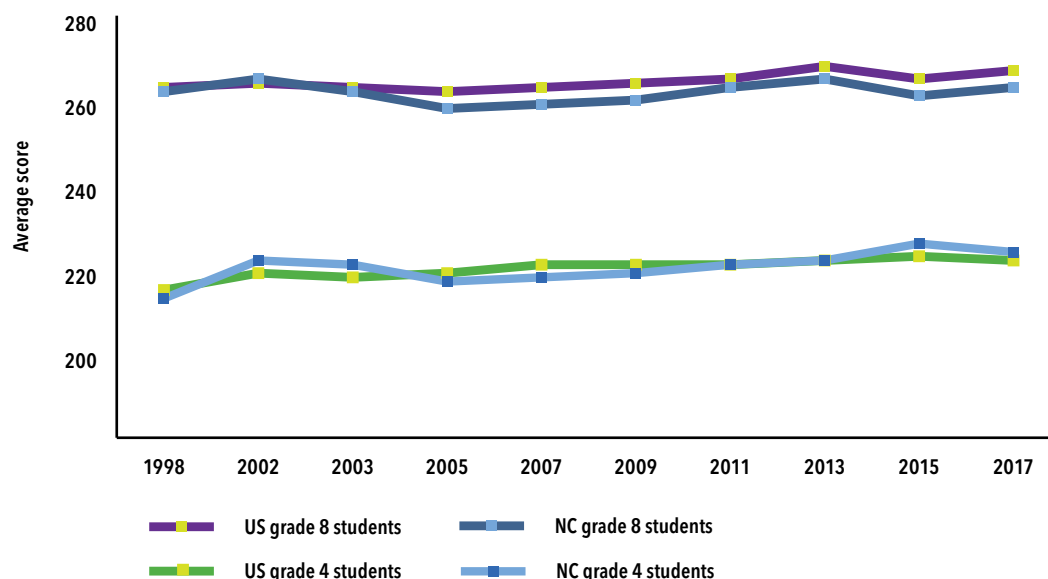


Source: Analysis of data generated through NAEP Data Explorer (2019)

The NAEP reading data are shown starting in 1998, the year in which the reading assessment was first administered at grade 8. The reading results show some progress for grade 4, with the average score increasing from 213 in 1998 to 221 in 2003, an increase of 8 points in five years. As in mathematics, the increase took North Carolina

from below to above the national average. However, the increase in grade 4 reading scores did not continue, as the average score increased by only 3 points in the 14 years from 2003 to 2017. The grade 8 reading data show no substantial gains from 1998 through 2017, with the score going up and down over only a 7-point range, from 258 to 265, across the 10 exams, with the 2017 score being 1 point higher than the 1998 score. As a result, North Carolina fell slightly behind the national average over these years.

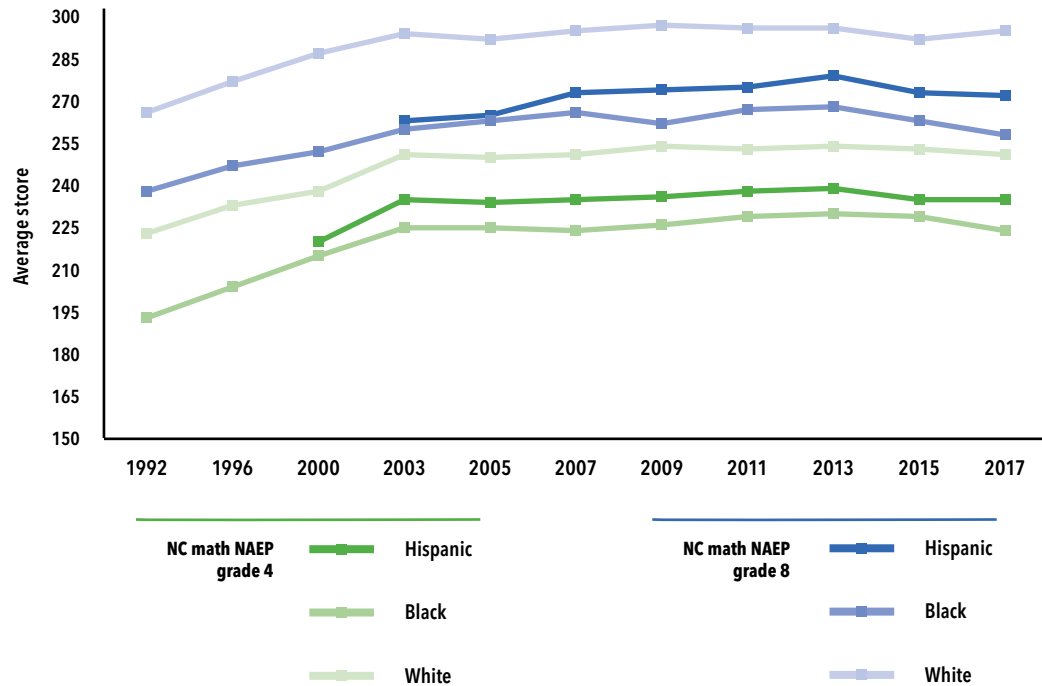
Exhibit 13. NAEP reading scores for grade 4 and grade 8 students in North Carolina and nationally, 1998–2017



Source: Analysis of data generated through NAEP Data Explorer (2019)

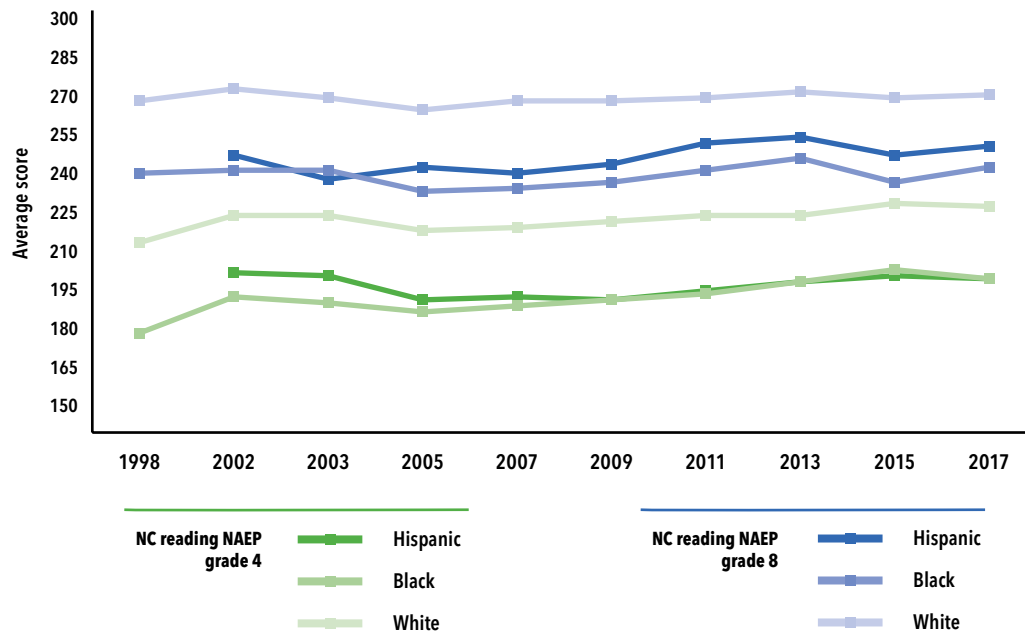
Disaggregating the NAEP data by student subgroups also shows persistent achievement gaps that are consistent with those found in the state test data, as shown for mathematics in Exhibit 14 and for reading in Exhibit 15.

Exhibit 14. North Carolina NAEP mathematics scores, by student group (1992–2017)



Source: Analysis of data generated through NAEP Data Explorer (2019)

Exhibit 15. North Carolina NAEP reading scores, by student group (1998–2017)



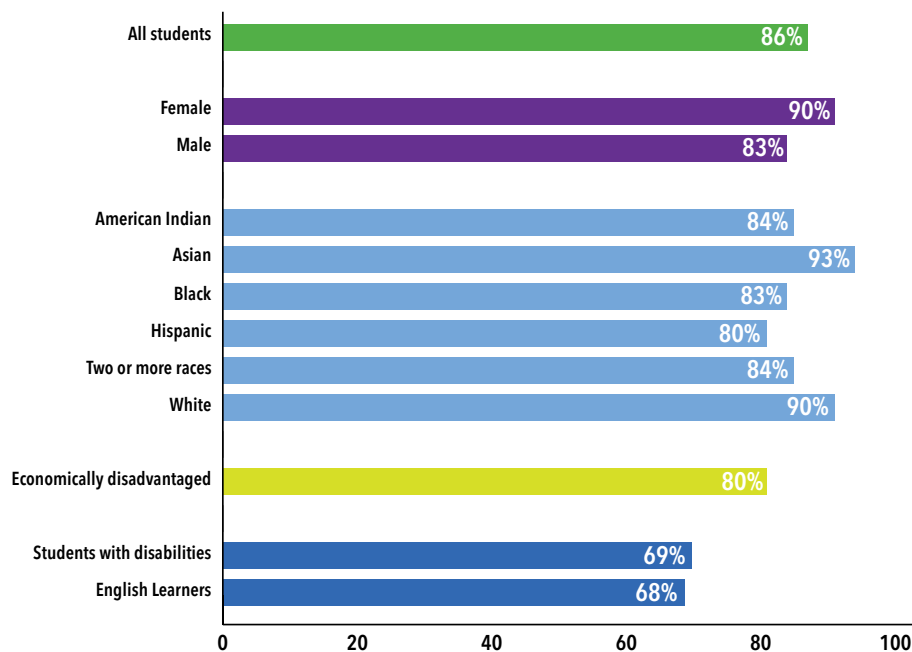
Source: Analysis of data generated through NAEP Data Explorer (2019)

Overall, both the North Carolina EOG and the NAEP data sets for elementary and middle school students show that more than 20 years after the *Leandro* decision, the nation-leading progress North Carolina showed in the 1990s and early 2000s has stalled in recent years, achievement gaps between student groups have continued unabated, and far too many of North Carolina’s students are not obtaining a sound basic education.

Graduation Rates and Preparation for Postsecondary Education

At first look, the data on high school graduation rates appear to show a more positive trend than the test data discussed in the previous section, as the graduation rate increased from 70% in 2008 to 86% in 2018. The rate increased for all student subgroups. Exhibit 16 shows the rate for each subgroup for the 2018 graduating class.

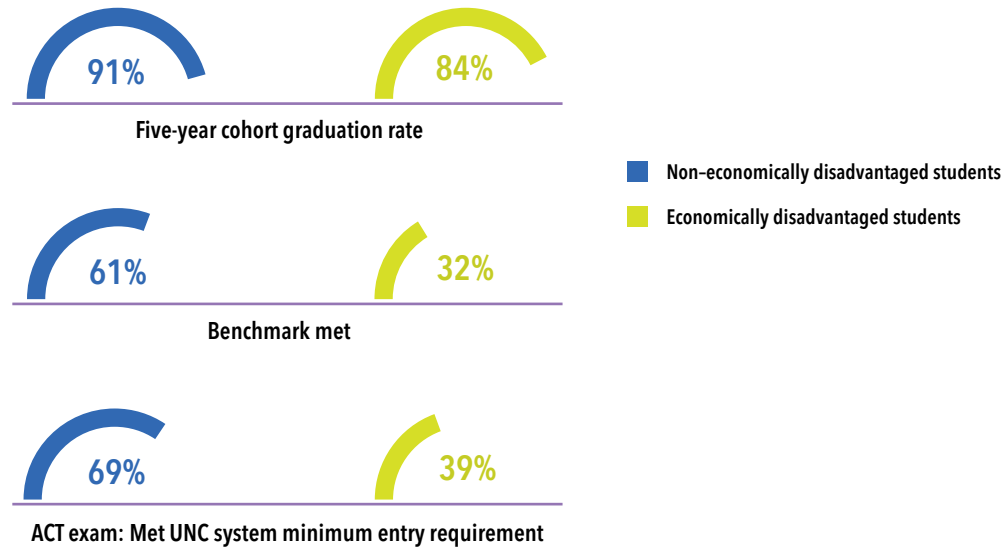
Exhibit 16. North Carolina four-year graduation rate, by student subgroup (2018)



Source: North Carolina Department of Public Instruction (2018b)

However, consideration of other relevant data raises the question of whether the increase in graduation rates truly reflects an increase in the number of students prepared for postsecondary education or the workforce. Exhibit 17 shows data for non–economically disadvantaged students (non-EDSs) on the left and for economically disadvantaged students on the right. The EDS five-year graduation rate (84%) is 7% less than the non-EDS rate (91%). However, the two groups have much larger differences in the percentage meeting college- and career-readiness benchmarks on North Carolina’s End-of-Course (EOC) tests (32% of EDSs vs. 61% of non-EDSs) and in the percentage meeting the UNC system’s minimal standard of the ACT college-readiness exam (39% of EDSs vs. 69% of non-EDSs), which is taken by all North Carolina high school students.

Exhibit 17. Five-year high school graduation rates and measures of postsecondary readiness for non–economically disadvantaged students and economically disadvantaged students (2018)



Source: North Carolina Department of Public Instruction (2018b)

Data on postsecondary success heighten the concern as to whether high school graduates are prepared to continue their education, which is one of the Court’s criteria for a sound basic education. Exhibit 18 shows that of all high school graduates from 2009 through 2011, 67% enrolled in postsecondary education programs by the end of the 2011–12 school year. Of those, 51% persisted past the first year of the program, and 34% obtained a degree or credential within six years of their first enrollment. In this analysis, postsecondary programs include colleges, universities, community colleges, and industry credentialing programs.

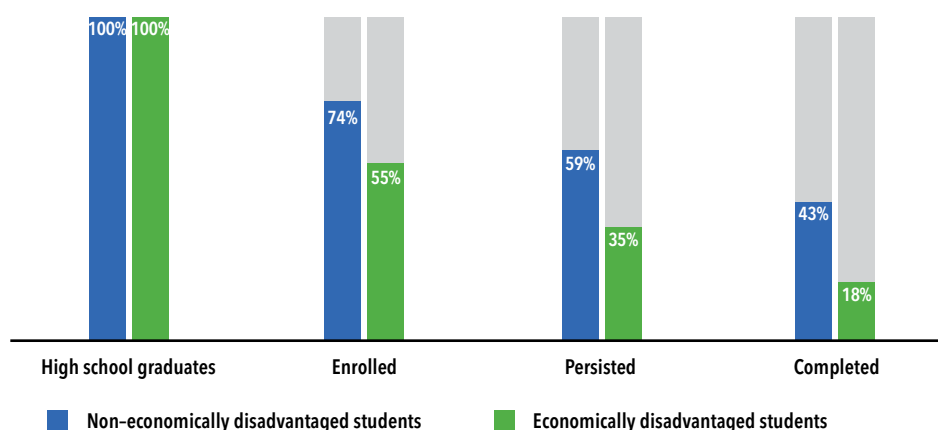
Exhibit 18. 2009–11 high school graduates' outcomes in postsecondary programs



Source: Tippet & Kahn (2018)

Exhibit 19 separates the same data into two subgroups of high school graduates: EDS and non-EDS. Only 18% of the EDS group earned a postsecondary degree or credential within six years of their first enrollment, whereas 43% of the non-EDS group earned a postsecondary degree or credential within six years of their first enrollment.

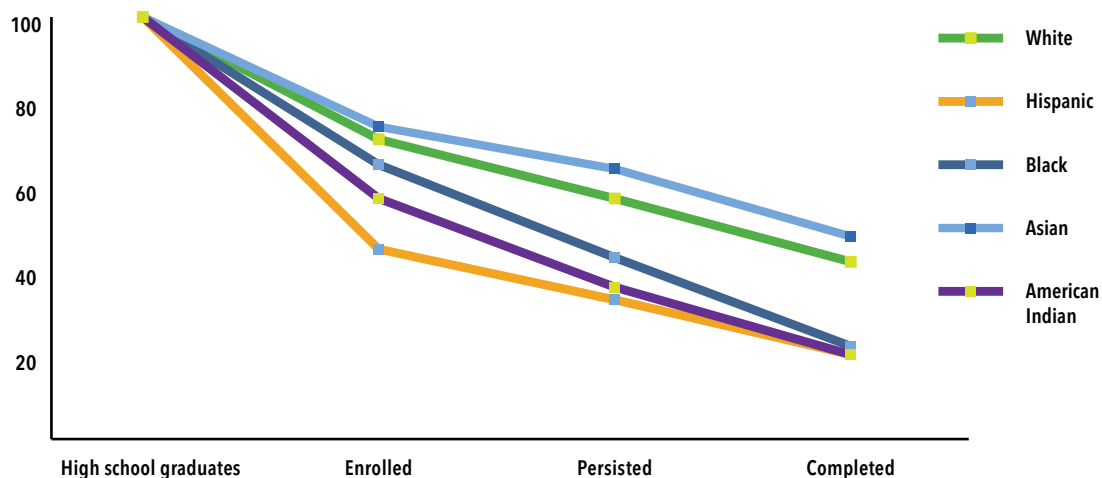
Exhibit 19. 2009–10 high school graduates' outcomes in postsecondary programs, by EDSs and non-EDSs



Source: Tippet & Kahn (2018)

Exhibit 20 shows that gaps are similar when racial/ethnic groups are compared: 20–22% of the Black, Hispanic, and American Indian students completed a postsecondary program, whereas 42% of the White students and 48% of the Asian students completed a postsecondary program.

Exhibit 20. 2009–10 high school graduates' outcomes in postsecondary programs, by racial/ethnic group



Source: Tippet & Kahn (2018)

Overall, the data clearly show that for many students, the state is not meeting the Court-defined requirements of a sound basic education, since the definition includes being prepared for success in postsecondary education or the workplace.

North Carolina's Current Education Goals

The student achievement goals in North Carolina's approved plan under the federal Every Student Succeeds Act provide further reason for concern. As shown in Exhibit 21, this plan sets goals for the year 2027 in reading and math for grade 3–8 students and for high school students on the state's EOG and EOC tests. Even if these goals are met, which would require an ambitious average annual increase of 2% to 3% in the number of students proficient in each area, more than one third of grade 3–8 students and more than one fourth of high school students would remain below proficient in reading, and more than one fourth of students from grade 3 through high school would remain below proficient in mathematics. That is, even if the ESSA plan's goals for 2027 are all met, North Carolina would continue to leave far too many students behind and would still be far from achieving success for every student.

Exhibit 21. Student achievement goals in North Carolina’s ESSA plan

Grade span/ assessment	Baseline performance, 2016 (all students)	10-year goal, 2027 (all students)	10-year improvement
Grades 3–8 reading	45.8	65.8	20.0
Grades 3–8 math	47.0	74.1	27.1
High school reading	51.0	71.3	20.3
High school math	43.5	73.3	29.8

Source: North Carolina Department of Public Instruction (2018a)

Current Status of *Leandro* Compliance

Judge Manning, in his final order before retiring, issued on March 17, 2015, concluded that the student results on the 2013–14 state math and reading tests for grades 3–8 and for high school, along with the ACT test results for high school, indicate that “in way too many school districts across the state, thousands of children in the public schools have failed to obtain and are not now obtaining a sound basic education as defined by and required by the *Leandro* decision.” He further concluded that “a definite plan of action is still necessary to meet the requirements and duties of the state of North Carolina with regard to its children having equal opportunity to obtain a sound basic education.” Judge Lee confirmed this in his March 2018 ruling, citing Judge Manning’s 2015 order and concluding, “The court record is replete with evidence that the *Leandro* right continues to be denied to hundreds of thousands of North Carolina children [and that the actions the state has taken so far are] wholly inadequate to demonstrate substantial compliance with the constitutional mandate of *Leandro* measured by applicable educational standards.”

In summary, the requirements of the *Leandro* decision are as relevant and essential today as they were when they were originally framed more than 20 years ago. Although there have been many efforts on the part of the state and districts to improve students’ achievement, the challenges of providing every student with a sound basic education have increased, along with the number of at-risk students. Multiple data sources document that minimal progress has been made on two major outcomes defined by the Court: (1) the proficiency rates of North Carolina’s students, especially at-risk students, in core curriculum areas; and (2) the preparation of students, again especially at-risk students, to be successful in postsecondary degree and credential programs. Large achievement gaps between subgroups of students continue unabated, with, on average, the achievement of Black, Hispanic, and Native American students lagging far behind that of White and Asian students and the achievement of economically disadvantaged students lagging far behind that of their more advantaged peers.

As North Carolina educators prepare for the 2019–20 school year, the state is further away from meeting its constitutional obligation to provide every child with the opportunity for a sound basic education than it was when the Supreme Court of North Carolina issued the *Leandro* decision more than 20 years ago.

Findings and Recommendations

Critical Needs to Be Addressed Through This Plan

The overall goal of the *Leandro* Action Plan is to guide North Carolina in implementing systemic approaches to increasing the capacity of its Pre-K–12 public education system to ensure every child receives a sound basic education.

The findings and recommendations described in this plan address the following critical needs to enable the state to meet this constitutional requirement:

1. **Revise the state funding model to provide adequate, efficient, and equitable resources.** These resources should be aligned to student needs in every school and district.
2. **Provide a qualified, well-prepared, and diverse teaching staff in every school.** Working conditions and staffing structures should enable all staff members to do their job effectively and grow professionally while supporting the academic, personal, and social growth of all their students.
3. **Provide a qualified and well-prepared principal in every school.** Principals should be prepared and supported to effectively lead continuous school improvement; support the use of a well-designed curriculum aligned with state standards; and establish a culture in which all students feel welcome, safe, supported, and challenged as learners.
4. **Provide all at-risk students with the opportunity to attend high-quality early childhood programs.** These programs should develop all students' personal, social, cognitive, and language skills in order to prepare them to begin kindergarten fully ready to learn.
5. **Direct resources, opportunities, and initiatives to economically disadvantaged students.** A strong focus should be placed on addressing the needs of economically disadvantaged students to address the greater challenges in those contexts.
6. **Revise the student assessment system and school accountability system.** The systems should provide the information needed by educators, parents, policymakers, and others about the educational effectiveness of each school and about the learning and progress of individual children and of subgroups of children. The system should also produce data to inform the evaluation and continuous improvement of educational programs and to enable the Court to track progress, identify areas of concern, and monitor compliance with the *Leandro* requirements.

7. **Build an effective regional and statewide system of support for the improvement of low-performing and high-poverty schools.** The state should define its approach to school improvement and develop the state system for assisting low-performing and high-poverty schools to: recruit and retain effective staff; provide high-quality professional development; use evidence-based instructional practices and curriculum; create effective school cultures; provide student supports; use data for continuous improvement; engage families; and foster collaborations across schools and districts.
8. **Convene an expert panel to assist the Court in monitoring state policies, plans, programs, and progress.** This monitoring should ensure the state's ongoing compliance with the *Leandro* requirements.



The following 8 sections report on the studies conducted, the findings and the recommended actions in each of the critical need areas.

Finance and Resource Allocation¹⁵



Critical Need: Revise the state funding model to provide adequate, efficient, and equitable resources. Resources should be aligned to student needs in every school and district.

North Carolina's current school finance system is an allotment system, based on a resource allocation model of funding. In a resource allocation model, the state determines which components are necessary for public education and provides resources specifically for each component. Compared with the nationwide average and neighboring states, North Carolina's public education system receives a substantially higher proportion of its funding from the state (see Exhibit 22). Consequently, North Carolina wields a particularly high level of influence in directing education funds toward where resources are most needed.

Exhibit 22. Public education funding by source, FY 2016

	Federal	State	Local
North Carolina	12%	62%	26%
South Carolina	10%	48%	43%
Tennessee	12%	46%	42%
Georgia	10%	46%	45%
U.S. average	8%	47%	45%

Source: National Center for Education Statistics, FY 2016 (2018)

Research Topics and Approach

The findings and recommendations in this section are drawn from a finance and resource allocation study that focused on three major components of an effective education resource allocation system: the equitable distribution of funding, the alignment of funding to student needs, and the adequacy of funding. Each of these components are cited in the *Leandro* rulings as areas of need that should be addressed by the state. Notably, these components must work in congruence with one another in order to progress toward the standard set by the Court. That is, one component alone is insufficient to either achieve the standard of the rulings or to remain consistent with the research and evidence on this topic. Specifically, the study addressed the following questions:

- » Distribution: What is the current distribution of funding across schools and districts? What factors, e.g., distribution of funds, create inequities in the allocation of resources, if any?
- » Alignment: Is funding flexible enough to ensure effective use of funds? Is funding stable enough to ensure effective use of funds?

¹⁵ These findings are drawn from the following research report: *A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K-12 Public Education System* (Willis et al., 2019). A brief summarizing this report can be found in Appendix A.

» Adequacy: How much funding is necessary to achieve North Carolina’s goals for student outcomes?

The study involved three complementary research components: a needs assessment, professional judgment panels, and a cost function analysis. The needs assessment included the collection of qualitative and quantitative data on North Carolina’s current education finance system, its evolution over time, and its strengths and weaknesses. The professional judgment panels involved the collection of data on educators’ perceptions of the most effective allocation of resources with alignment to student need. The cost function analysis estimated the minimum cost necessary to achieve certain outcomes, with specified inputs and environmental factors.

Findings

❖ Finding #1: Funding in North Carolina has declined over the last decade.

As of fiscal year (FY) 2017, the most recent year for which national rankings are available, North Carolina’s total per-pupil spending was sixth lowest in the nation (U.S. Census Bureau, 2019). Furthermore, when adjusted to 2018 dollars, per-pupil spending in North Carolina has declined overall, about 6% since 2009–10 (U.S. Census Bureau, 2019).

❖ Finding #2: The current distribution of education funding is inequitable.

Across the three study components, the statewide distribution of funding was found to be inequitable in two key ways: (1) school districts lack the funding necessary to meet the educational needs of historically underserved student populations, and (2) funding across districts is inequitable due to differences in local funding, differences in state funding received through the Classroom Teacher allotment, and differences in regional costs.

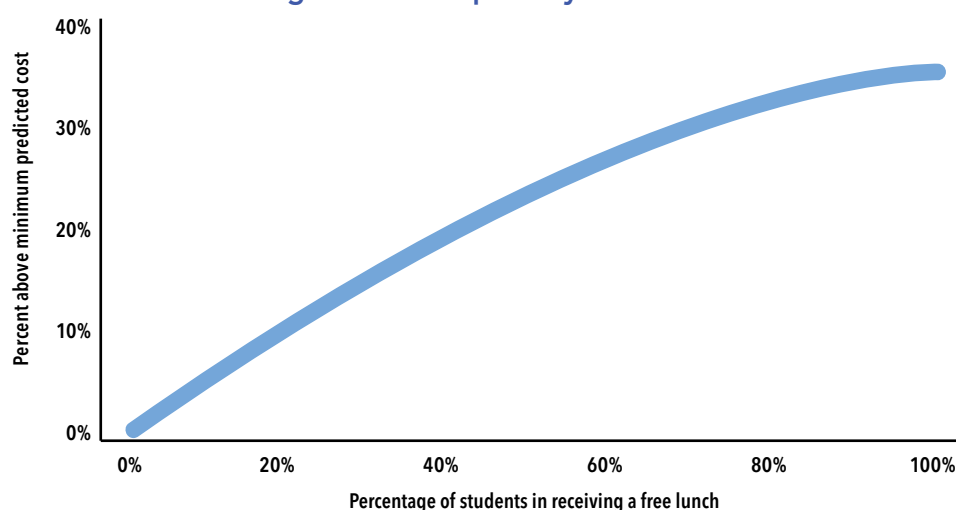
Many district chief financial officers (CFOs) described inequities in North Carolina’s finance system and identified the system’s overall inadequate funding as a contributor to inequity. However, not all CFOs described the funding system as inequitable. Many of those who described the funding system as equitable — or noted that the structure of the funding system could theoretically be considered equitable — referenced allotments that are intended to provide additional resources to higher-needs students. Although several CFOs reported that these allotments help, they also described how these allotments are underfunded.

❖ Finding #3: Specific student populations need higher levels of funding.

Consistent with prior research (Duncombe & Yinger, 2004; Taylor, Willis, Berg-Jacobson, Jaquet, & Caparas, 2018), the research team’s education cost function analysis indicates that more funding is required to produce the same outcomes for student populations with greater needs (e.g., English learners, economically disadvantaged students (EDSs), and exceptional children). Similarly, the professional judgment panels consistently noted that additional resources are necessary to adequately serve students with greater needs. Recommendations from the professional judgment panels include, for example, the provision of resources to support additional professional staff (e.g., counselors, social workers) and interventions (e.g., extended learning time, reading and math intervention staff) for economically disadvantaged students.

Exhibit 23 illustrates the need for higher levels of funding to support EDSs, specifically. As the proportion of EDSs within a school (defined as the percentage of the school population eligible for free lunch) grows, so does the additional per-pupil cost. For example, if we take School A with a population composed of 60% economically disadvantaged students and compare it with School B with a population of 90% economically disadvantaged students, the predicted cost per pupil to ensure those students reach the same performance level will be greater in School B than in School A. The high per-pupil costs associated with serving high concentrations of economically disadvantaged students affects a substantial proportion of North Carolina schools; approximately 31% of schools in the state are serving student populations in which more than 90% of students are economically disadvantaged.

Exhibit 23. Costs of educating students in poverty



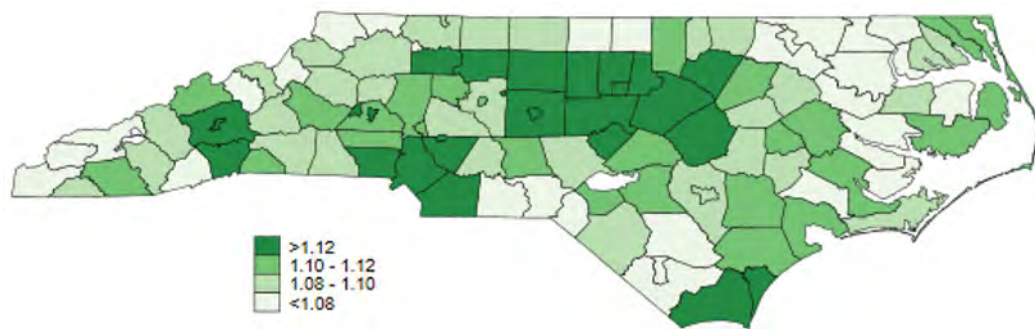
✦ Finding #4: Greater concentrations of higher-needs students increases funding needs.

Districts with higher concentrations of economically disadvantaged students and higher concentrations of English learners need higher levels of per-pupil funding, though the predicted costs flatten out at the highest levels of EDSs. For example, the predicted per-pupil cost for a school whose student population is 96% economically disadvantaged is \$7,980, which is the same predicted per-pupil cost for a school whose student population is 99% economically disadvantaged. The education cost function analysis also suggests that the cost per-pupil generally increases as the proportion of special education students increases. However, the increase for each additional student goes down at larger proportions and, after the population reaches about 20%, predicts slightly less supplemental per-pupil funding is needed (i.e., as the concentration of exceptional children increases, the additional funding necessary to serve these students decreases slightly). This may be because as the population of exceptional children increases, a school is able to serve these students more efficiently, bringing down the additional cost to serve an additional student.

❖ Finding #5: Regional variations in costs impact funding needs.

The education cost function analysis also found that, all else being equal, the cost of educating students in some regions of the state is higher than in others, primarily due to regional cost factors (e.g., cost of living, local amenities) that impact labor costs. In the model, this was measured by a teacher salary cost index that indicates the regional variation in teacher salaries due to factors beyond district control. Exhibit 24 displays the geographic variation in an average district-level salary index. The district-level salary indices range from a low of 1.00 to a high of 1.21, indicating that the cost of employing teachers is 21% higher in some parts of North Carolina than it is in others. In addition to increased labor costs, there are also regional cost variations in non-labor resources. These costs were found to be higher (1) the closer a school is to major metropolitan area (primarily urban areas), (2) in very rural areas, and (3) in coastal communities.

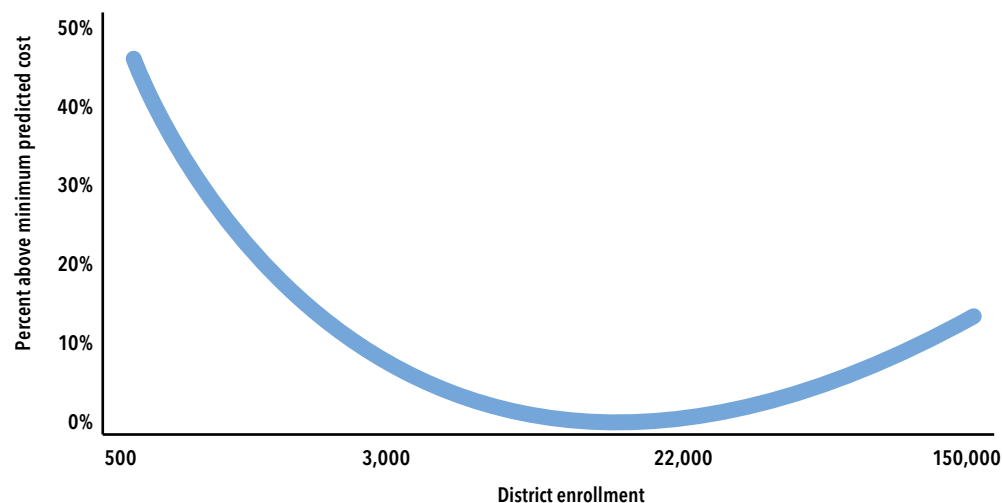
Exhibit 24. Map of average district-level North Carolina salary index, 2016–17



❖ Finding #6: The scale of district operations impacts costs.

An observed trend in economic literature is that as organizations produce more units, their marginal costs (i.e., the cost of producing each unit) tend to go down, except at a very large scale of production (Silvestre, 1987; Canback, 1998). This is often described by a concept known as “economies of scale,” which refers to the notion that as an organization grows in size, it is able to produce more efficiently, and thus its marginal costs to produce each additional unit tend to decline. The exception occurs when production gets to an extremely large scale. At this point, due to the inherent cost of managing the scale of operation, marginal costs increase again (referred to as “diseconomies of scale”). Previous research has confirmed that diseconomies of scale occur within very large public school districts (Robertson, 2007). The results of the cost function analysis suggest that this concept applies to public school district operations, as does previous research (Augenblick, Myers, & Silverstein, 2001; Andrews, Duncombe, & Yinger, 2002). As the number of students goes up, the cost to produce the same academic growth goes down, except in very large school districts, where the marginal costs begin to creep up again. This finding is illustrated in Exhibit 25.

Exhibit 25. Cost to achieve equivalent outcomes as district enrollment increases



This finding does not suggest a specific policy direction for the state about the organization and appropriate size of school districts. Rather, it indicates that in North Carolina, the relationship between the scale of district operations and per-pupil cost is consistent with previous research findings and should be considered as a factor when funding districts to deliver educational services for students. For example, the state could align its funding allocations for districts — both small and large — to ensure challenges related to economies of scale are offset by the funding allocations. Alternatively, the state could support districts to achieve economies of scale by developing shared services within regions. Existing practices in parts of the state in areas such as transportation or special education services could serve as models.

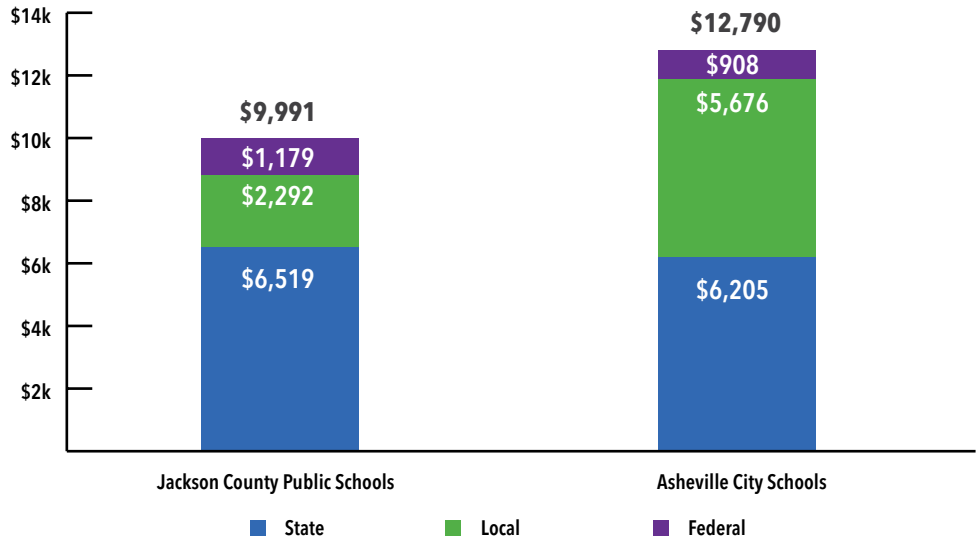
❖ Finding #7: Local funding and the Classroom Teacher allotments create additional funding inequities.

The Classroom Teacher position allotment, which covers teacher salaries and benefits, is the largest state allotment to school districts, representing 42% of funding for school districts in the 2017–18 school year (North Carolina Department of Public Instruction, 2017). An analysis of public year-to-date allotment data shows inequities in North Carolina’s allotment system. The analysis found a positive and statistically significant correlation between per-pupil district wealth (as measured by the adjusted property tax base) and per-pupil funding received through the Classroom Teacher allotment. This indicates that wealthier districts receive, on average, more funding through the Classroom Teacher allotment than do less-wealthy districts. Nevertheless, CFOs interviewed were largely positive about the position allotment, noting that position allotments enable school leaders to hire teachers based on their qualifications, rather than on budgetary impact.

In addition to inequities in state funding through the Classroom Teacher allotment, there are other inequities based on local wealth that present a challenge for lower-wealth districts. For instance, Exhibit 26 illustrates the difference in total per-pupil funding between two nearby districts with similar student enrollment: Asheville City Schools and Jackson County Public Schools. Asheville City Schools (which, as Exhibit 27 shows, has 37% of its

students eligible for free lunch) receives \$5,676 in per-pupil local funding. That is nearly 2.5 times as much as the \$2,292 in per-pupil local funding received by Jackson County Public Schools (which has 57% of its students eligible for free lunch). Considering the total of state, local, and federal funding, Asheville receives approximately 28% more in total per-pupil funding.

Exhibit 26. Disparity in funding between two nearby districts of similar size



Source: North Carolina Department of Public Instruction Statistical Profile — Table 24 (2018)

Exhibit 27. Example of a district with lower funding levels serving students with higher levels of need

	Jackson County Public Schools	Asheville City Schools
Total enrollment	3,772	4,558
% economically disadvantaged (eligible for free lunch)	57%	37%
% English learners	4%	2%
% exceptional children	14%	12%

Source: National Center for Education Statistics, Common Core of Data (2017)

This finding is corroborated by prior research. For example, the Public School Forum of North Carolina (2019) found a gap of more than \$2,400 per student between the state’s 10 counties that spent the most in local contributions per student and the 10 counties that spent the least.

❖ Finding #8: New constraints on local flexibility hinder district ability to align resources with student needs.

Lack of flexibility in how to spend state funds was CFOs' most frequently cited obstacle in aligning funding with student needs at the local level. In addition, CFOs noted the challenge posed by a lack of finance system stability due to frequent changes in the allowed uses of funds. Restrictions on the allowable uses of allotments, including new restrictions around the Classroom Teacher allotment (discussed in more detail below), also hamper districts' ability to align funding to student needs. The analysis found that in 2010–11, allotments with substantial flexibility represented roughly three quarters of K–12 state funding. By 2018–19, allotments with substantial flexibility represented only about one fifth of K–12 state funding. When funds are restricted to a particular use and cannot be transferred, it restricts district leaders' ability to make decisions about how to allocate resources to make the greatest impact on student outcomes given their local circumstances.

❖ Finding #9: Restrictions on Classroom Teacher allotments reduce flexibility and funding levels.

Several CFOs reported that recent restrictions on the transfer of funds from the Classroom Teacher allotment presented a particularly significant challenge, reducing districts' funding flexibility, creating inequities, and reducing some districts' overall funding. Prior to the 2012–13 school year, districts could transfer Classroom Teacher allotment funds to another area at the statewide average teacher salary level. Now, districts can only transfer these funds at a starting teacher salary level, rather than the average salary level. Although the state budgets for each district to receive a Classroom Teacher allotment that reflects the statewide average, if districts cannot recruit teachers who command salaries at the statewide average or higher, then the difference in allotted funds reverts back to the state budget. Because lower-wealth districts hire lower-paid teachers on average, this leads to even greater funding inequity.

❖ Finding #10: Frequent changes in funding regulations hamper budget planning.

District CFOs reported the unpredictability of funding regulations and frequent legislative changes creates instability in the system and limits their ability to do longer-term budget planning. This instability makes it difficult to make strategic investments (e.g., investing in new technology) or long-term system adjustments (e.g., consolidating schools), as new regulations around funding, class sizes, and other features can make these changes infeasible the following year.

❖ Finding #11: The state budget timeline and adjustments create instability.

Because district funding is based on enrollment (average daily membership, or ADM), most CFOs described their year-to-year funding amount as fairly stable, or at least predictable. However, CFOs reported that the state's process for finalizing each district's budget, which involves adjustments after the school year begins, creates instability for budget planning. Districts whose ADM is higher than projected must wait until they receive their additional funding to hire the additional teachers necessary to keep class sizes within the state-mandated student-teacher ratios. Conversely, state allocations for districts whose ADM is lower than projected may not

support all of the staff that they have hired for the current year, leaving districts with the challenge of finding other funds to fill the gap.

CFOs also reported that the state's frequently changing, overly complicated funding system require them to spend a disproportionate amount of time ensuring that their budgets are in compliance with state regulations. CFOs also identified the transfer of funding from districts to charter schools as a particularly unnecessary administrative burden that obstructs their budget forecasting and planning process.

✦ Finding #12: There is inadequate funding to meet student needs.

This study presents several models for new short-term investments over eight years and new ongoing investments in the K–12 education system to provide the state with options for improving the distribution, alignment, and adequacy of funding for K–12 operating expenditures. In considering the level of funding necessary to achieve the standard of a “sound basic education” as described in the *Leandro* rulings, it is important to consider the findings of this section in tandem with the findings from other sections of the report, particularly those that may support districts to more effectively use their existing resources. For example, if the state only invests additional dollars in the K–12 education system without also changing the mechanisms for distributing funding to districts, and without support and monitoring tools for districts to consider the most effective use of resources, then it is less likely that the desired student outcomes will be achieved.

This research indicates that in order for the state to meet the requirements of *Leandro*, it needs to increase funding in two ways: (1) make short-term investments over the next eight years to reduce the gap between lower-performing students and their higher-performing peers, and (2) in tandem, provide additional ongoing funding (i.e., funding that would be maintained after eight years of short-term investment) to ensure that once students reach desired performance targets, this growth will be maintained. Accordingly, after the short-term investment period — assuming all students are performing at grade level — the state focus would be on maintaining just the ongoing funding levels.

To determine the adequacy of education funding, student performance thresholds need to be used — such as statewide graduation rates and statewide percentages of students meeting state standards in English Language Arts (ELA) and Math — as benchmarks for observing the costs associated with students and schools achieving those results. Through the course of this investigation, the state did not identify such thresholds. Therefore, the adequacy component of this study, and thereby this finding, identifies various possible thresholds of performance and calculates the financial investments required to meet these targets. Specifically, the study identified financial investments linked to achieving student performance levels identified in the ESSA state plan and those necessary to reach the requirements within the *Leandro* rulings. The adequacy results also presume that the state will incorporate findings associated with the distribution and alignment of the financing system in order to maximize the effectiveness of the state's investment in education.

It should be noted that the analysis and results presented below use a constructed measure of “operating expenditures,” which includes the day-to-day expenses of districts and schools, such as salaries, benefits, purchased services, and supplies and materials. Some categories of expenditures were not considered to be operating

expenditures. These excluded categories include debt service; construction expenditures; fund transfers; food services; judgments and settlements against the district; transportation services; tuition- or fee-funded programs (e.g., before- and after-school care, preschool); ancillary services; payments to other government units except indirect costs; and nonprogrammed charges. Finally, charter schools were also excluded because they have different cost structures than traditional public schools, as were a handful of special schools for which no spending data was provided. Therefore, the expenditures reported represent K–12 operating expenditures in traditional schools.¹⁶ The inclusion and exclusion categories in this study are consistent with prior, similar analyses. Nevertheless, the study’s definition of operating expenses should be noted by readers as they review the cost estimates reported in this summary.

The cost estimates for operating expenditures of K–12 schools and districts were constructed observing that (a) there are students who currently are not performing as well as other students in the state and therefore require *short-term investment* supports to accelerate their growth, (b) an *ongoing investment* is necessary to maintain the level of student performance commensurate with the rulings of *Leandro*, and (c) investments in other areas of public education — namely, early childhood education and other state-level investments — are vital in achieving the modeled student outcome results. For example, state-level investments will be needed to ensure sufficient pipelines of effective teachers and principals, revise the state’s assessment and accountability system, and create a statewide system of support for schools in need of improvement. The cost estimates presented below **do not** include associated costs for early childhood education or any of the other suggested state-level investments, which are presented for further discussion later, in the Overview of Investment and Sequence of Activities section.

Using the most recent information provided by the state for the 2016–17 fiscal year (FY 2017), the exhibit below displays total and per-pupil operating expenditures. The state’s traditional public schools had \$12.16 billion in operating expenditures, about \$8.3 billion of which was provided by state funds. This amounts to \$8,346 per pupil, of which \$5,690 per pupil was provided by the state, on average. Exhibit 28 provides a further breakdown of operating expenditures, which can be used as a comparison to the cost estimates in the next section.

Exhibit 28. Operating expenditures, 2016–17, adjusted for inflation to July of 2019

	Total spending (in billions)	Average per-pupil spending
State	\$8.29	\$5,690
Local	\$2.78	\$1,911
Federal and other	\$1.09	\$745
Total	\$12.16	\$8,346

Note: Values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics cost price index (CPI) calculations over the period July 2017 to July 2019.

16 Due to missing data, the analysis sample excluded approximately 50 additional schools.

Short-term and Ongoing Investment Scenarios Based on Performance Threshold Assumptions

WestEd’s research team modeled a variety of scenarios — based on different thresholds for student performance — to produce a range of cost estimates for the state. Through the presentation of these short-term and ongoing investment scenarios, this study intends to provide the state with a range of options to consider for strengthening the distribution, alignment, and adequacy of funding for K–12 operating expenditures. In constructing the cost estimates, it is assumed that both types of investments — short-term and ongoing — are coordinated to achieve the desired result of *providing all students with the opportunity of a sound basic education*. Such coordination requires that the state and districts create both monitoring tools and support mechanisms to ensure that current investments, and any future investments, are used effectively. It also requires that implementation occurs over time, creating an opportunity for districts and schools to plan for the necessary changes in their systems. For purposes of these scenarios, implementation is presumed to span eight years, which coincides with the timeline identified in the North Carolina Every Student Succeeds Act (ESSA) plan.¹⁷

The short-term cost estimates use specific performance thresholds, i.e., set percentages of students achieving proficiency on the statewide ELA and Math assessments, as benchmarks for student performance, recognizing that some students are not currently achieving at grade level and need additional support to achieve those benchmarks. Once students requiring additional support have achieved this standard of performance — in conjunction with all other students already achieving at such a level — the ongoing investment scenarios use student growth thresholds to ensure all students maintain performance at grade level.

Short-term Investment Scenarios

While the ongoing investment scenarios represent funding levels that would help to *maintain* the average annual growth of students, the short-term (eight years) investment scenarios represent the support necessary to enable performance *gap reduction* between lower-performing students and their higher-achieving peers. In these investment scenarios, the cost estimates use absolute thresholds of performance to evaluate the necessary, differential growth needed for student populations that are currently not meeting proficiency (or standards) in North Carolina. It is intended, as the name would suggest, that these investments are short-term in nature and are meant to support changes in the public school system that permanently alter the structures of schooling to enable all students to meet the standard of the *Leandro* ruling of a “sound basic education.”

In the first (“Short-term A”) and second (“Short-term B”) scenarios, all students are projected to achieve average annual, grade-level growth, except for students in schools that are not currently meeting proficiency targets. Students not currently meeting proficiency targets are assigned growth levels that would allow them to achieve proficiency as defined by North Carolina’s current Every Student Succeeds Act (ESSA) plan.¹⁸ Under the state’s ESSA plan, the state aims for proficiency levels of 74.1% in Grades 3–8 Math and 73.3% in High School Math by

17 State of North Carolina. May 29, 2018. *ESSA Consolidated State Plan*. Submitted to the U.S. Department of Education. <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>

18 State of North Carolina. May 29, 2018. *ESSA Consolidated State Plan*. Submitted to the U.S. Department of Education. <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>

the year 2027. For English Language Arts (ELA), the targets are 65.8% in Grades 3-8 Reading and 71.3% in High School Reading by 2027. Notably, independent reviewers regard the ESSA plan and the associated proficiency targets as not meeting a sufficient level of rigor (Aldeman, Hyslop, Marchitello, Schiess, & Pennington, 2017).

Achieving the ESSA plan goals for 2027 (modeled in Short-term A and Short-term B) would substantially reduce achievement gaps, but it would not completely eliminate gaps between students in the highest-poverty schools and students in the lowest-poverty schools; therefore, it would not achieve the full standard set out by the *Leandro* rulings. However, Short-term A and Short-term B scenarios do accomplish several things. First, they demonstrate that the state does not currently fund its education system sufficiently to allow it to reach its own minimal targets identified in their ESSA plan. Second, the scenarios offer a starting point for discussion among decision-makers about education funding levels using the state's own documented goals for student performance.

Short-term A and Short-term B model different approaches to achieving increased proficiency for underperforming students. In Short-term A, each school currently not achieving proficiency is identified by comparing the school's current proficiency rates on ELA and Math with statewide targets. Then, students are ranked from nearest to farthest from the standard for proficiency. This model applies a growth rate to those students between approximately the 25th and 75th percentile that would allow them to achieve proficiency. All other students currently not meeting proficiency would achieve average annual growth and not attain proficiency under the state standards. This model simulates a practical expectation — and observable past behavior of school improvement implementation — in that most schools will provide support to students in groups, rather than developing individual intervention plans for each student.

Short-term B uses a slightly different approach. First, each school currently not achieving proficiency is identified by comparing the school's current proficiency rates on ELA and Math with statewide targets. Then, students are ranked from nearest to farthest from the standard for proficiency. This model then applies the necessary growth rate to the lowest-performing student in the school to reach proficiency. This is followed by the second lowest-performing student and so on, until the overall proficiency rate for the school hits the state-identified target. This model simulates a different school improvement approach in which students would likely need more individualized approaches to ensure their performance level increases at the desired rate.

When comparing these first two short-term scenarios, Short-term B is more expensive than Short-term A. This is primarily because a greater amount of support is necessary to bring the lowest-performing student to proficiency, as compared to a student who is closer to the standard of proficiency. This also explains why the overall proficiency rates achieved in Short-term B are very slightly lower than in Short-term A; on average, it costs more for the lowest-performing students to achieve each percentage point of growth, compared with other students. The exhibit below presents the performance and cost estimate results from Short-term A and Short-term B, as well as the differences in performance of the highest- and lowest-poverty schools. These cost estimates are assumed to be phased in over an eight-year period.

Exhibit 29. Comparison of Short-term A and Short-term B scenarios phased in over eight-year period

	Current	Short-term A: 25th-75th Percentile to Proficiency	Short-term B: Lowest-Achieving Students to Proficiency
Estimated State Spending	n/a	\$1.58	\$2.33
Per-Pupil Cost Estimate (\$)	n/a	\$1,087	\$1,599
Statewide ELA Proficiency (%)	58.9	68.3	68.1
Statewide Mathematics Proficiency (%)	52.4	75.3	74.8
High-Poverty Schools ELA Proficiency (%)	43.8	65.6	64.9
High-Poverty Schools Math Proficiency (%)	42.4	74.5	73.7
Low-Poverty Schools ELA Proficiency (%)	79.1	80.6	80.1
Low-Poverty Schools Math Proficiency (%)	81.8	78.6	78.6

Notes: Overall subject-level proficiency data (i.e. math and ELA) includes all grade levels 4–9 (Mathematics) and 4–8, 10 (ELA). High-poverty schools (n=825) are defined as those serving a population of 75% or more students that qualify for free or reduced-price lunch. Low-poverty schools (n=182) are defined as those serving a population of 25% or less students that qualify for free or reduced-price lunch. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Short-term A is an additional \$1.58 billion investment, or approximately \$1,087 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$198 million per year, or \$136 per pupil per year. The cost associated with Short-term B is an additional \$2.33 billion investment, or approximately \$1,599 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$291 million per year, or \$200 per pupil per year. A large portion of these dollars would be allocated to schools and districts serving students in high-poverty settings.

In the last scenario (Short-term C), the performance threshold is grounded in the Court’s *Leandro* ruling: specifically, from the Memorandum of Decision, *Hoke County Board of Education v. State* (Wake Co. Super. Ct., Oct. 12, 2000), hereafter referred to as the Oct. 12, 2000 Memorandum of Decision. As Judge Manning stated, “North Carolinians should expect no less for their children than an educational goal that seeks to have every child perform at Level III proficiency or above ...” (Oct. 12, 2000 Memorandum of Decision, p. 183). Further, the October 12, 2000 Memorandum of Decision (pg. 187-8) notes the proportion of students that should be achieving proficiency: “Every school in North Carolina is capable of having 90 percent of its students score at proficient levels (i.e., Level III or IV) on the EOG or EOC tests (except for students with disabilities or LEP who are excused from the tests).”

Short-term C replicates the design of Short-term B, in which the lowest-performing students experience targeted growth, but the school-level proficiency benchmarks are increased to 90% of students for all subjects and grade levels (from proficiency levels of 74.1% in Grades 3–8 Math and 73.3% in High School Math and for ELA 65.8% in Grades 3–8 Reading and 71.3% in High School Reading under Short-term A and B). In this scenario, the exact number of lowest-performing non-proficient students is elevated (if necessary) in order for each school to reach 90% of students at proficiency on both subjects at every grade level. Non-proficient students that are not elevated to reach proficiency goals achieve average grade-level growth. The table below presents the performance and cost estimate results from Short-term C and includes the differences in performance of the highest- and lowest-poverty schools. These cost estimates are assumed to be implemented over an eight-year period.

Exhibit 30. Short-term C Scenario phased in over eight-year period

	Current	Short-term C: <i>Leandro</i> Compliant
Estimated State Spending Less Ongoing A	n/a	\$3.16
Per-Pupil Cost Estimate (\$)	n/a	\$2,170
Statewide ELA Proficiency (%)	58.9	91.5
Statewide Mathematics Proficiency (%)	52.4	90.9
High-Poverty Schools ELA Proficiency (%)	43.8	90.0
High-Poverty Schools Math Proficiency (%)	42.4	90.2
Low-Poverty Schools ELA Proficiency (%)	79.1	91.9
Low-Poverty Schools Math Proficiency (%)	81.8	91.7

Note: Overall subject-level proficiency data (i.e. math and ELA) includes all grade levels 4–9 (Mathematics) and 4–8, 10 (ELA). High-poverty schools (n=825) are defined as those serving a population of 75% or more students that qualify for free or reduced-price lunch. Low-poverty schools (n=182) are defined as those serving a population of 25% or less students that qualify for free or reduced-price lunch. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Short-term C is an additional \$3.16 billion investment, or approximately \$2,170 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$395 million per year, or \$271 per pupil per year.

Ongoing Investment Scenarios

Under *Leandro*, the Court affirmed that local education agencies (LEAs) are “entitled to funding by the state sufficient to provide all students, irrespective of their LEA, with at a minimum, the opportunity to obtain a sound basic education” (*Hoke County Board of Education v. State*, 2004). The first scenario (“Ongoing A”) describes the cost estimate for an ongoing investment that would ensure the “minimum standard” is achieved for *all students*. In the context of student growth, that means that every child is achieving average annual growth for each year of instruction. In modeling student growth, this equates to a conditional normal curve equivalent (NCE) score of

50. A conditional NCE score of 50 indicates that, on average, students performed exactly as expected given their prior test performance. (By contrast, a conditional NCE score of 80, for example, would indicate that, on average, they performed as well as or better than 80% of their peers.)

Further, as the ruling refers explicitly to “funding by the state,” this study assumes that to meet its obligation under *Leandro*, the state must at least provide sufficient funds to meet a sustained, minimum standard. Therefore, under Ongoing A, the cost estimate represents the state’s obligation. The table below outlines the differences in spending between the state’s current investment and its potential investment under the Ongoing A scenario.

Exhibit 31. Comparison of current spending versus ongoing A

	Current	Ongoing A	Difference	% Diff.
Total State Spending (\$ in billions)	\$8.29	\$11.99	\$3.70	44.6%
Per-Pupil Cost Estimate (\$)	\$5,690	\$8,230	\$2,540	

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as “inefficient” by the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics cost price index (CPI) calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Ongoing A is an additional \$3.70 billion investment, or approximately \$2,540 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$463 million per year, or \$318 per pupil per year. Although Ongoing A (and in the next section Ongoing B) are presented as an investment over eight years to match the short-term investment models, in practice they represent ongoing annual investments. Unlike the short-term investments, which would be completed after eight years and are modeled as a *supplement* to ongoing funding, the annual ongoing investment would need to continue indefinitely.

The second scenario (“Ongoing B”) recognizes that most students in some districts already outperform the standard, as do some students in even the lowest-performing districts. Under this scenario, the study estimates the amount of funding required to ensure that each individual student achieves at least average annual growth, maintaining the academic growth of students already performing at or above the average. This represents a conditional NCE score of approximately 58. The difference between Ongoing B and Ongoing A represents the additional spending required to maintain this above-average growth. The extent to which this additional spending is the state’s obligation is less clear, given that the Court held that the state constitution does not require that “substantially equal educational opportunities beyond the sound basic education mandated by the Constitution must be available in all districts” (*Leandro v. State*, 1997). Thereby, this additional investment may be the responsibility of local school districts’ additional contribution for K–12 operational spending.

The table below summarizes the cost estimates for Ongoing B compared to current total state and local spending.

Exhibit 32. Comparison of current spending versus ongoing B

	Current	Ongoing B	Difference	% Difference
Total State/Local Spending (\$ in billions)	\$11.08	\$14.86	\$3.78	34.1%
Per-Pupil Cost Estimate (\$)	\$7,601	\$10,199	\$2,598	

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as “inefficient” by the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics cost price index (CPI) calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Ongoing B is an additional \$3.78 billion investment, or approximately \$2,598 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$473 million per year, or \$324 per pupil per year. As with Ongoing A, the Ongoing B annual investment would need to continue indefinitely in order to maintain annual student growth.

Sum of State Funding Under Ongoing A and Short-term C Scenarios

In presenting these various ongoing and short-term funding scenarios, this study intends to provide the state with options to use as they deliberate the best course of action when considering the distribution, alignment, and adequacy of funding for K–12 operating expenditures. However, when determining which scenarios most accurately meet the standard of the *Leandro* ruling — reducing gaps for the state’s lower-performing students and maintaining such growth so that students achieve at grade level each year — Ongoing A and Short-term C appear to mostly closely fit that definition. Therefore, Exhibit 33 below displays the sum total of these scenarios relative to the state’s current investment in public education, showing the additional amount of funding needed if the state were to pursue the Ongoing A and Short-term C scenarios.

Exhibit 33. Additional funding beyond current state spending: Ongoing A and Short-term C implemented over eight-year period

	Sum total (\$ in billions)	Sum total per pupil (\$)	Total per year (\$ in billions)	Average per pupil per year (\$)
Current State Spending	\$8.29	\$5,690		
Ongoing A Scenario	\$3.70	\$2,540	\$0.46	\$318
Short-term C Scenario	\$3.16	\$2,170	\$0.39	\$271
Ongoing A + Short-term C	\$6.86	\$4,710	\$0.86	\$589

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as not contributing directly to the outcomes incorporated into the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics cost price index (CPI) calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

Other Factors That Influence the Effectiveness of Additional Investments

As is clear from the findings displayed in Exhibit 33, the cost function analysis found the current level of state spending to be inadequate based on the minimum standard of average annual academic growth and for accelerating underperforming students to proficiency. Notably, these models are based on the previously identified criteria about student growth and the attainment of schools' overall proficiency rates. Important also in the context of this modeling is that the choices of policymakers and practitioners about the use of these resources, and the resulting outcomes for students, cannot be observed. This fact reinforces the importance of pursuing the findings and recommendations in this section in tandem with the other recommendations included in the report as a means to leverage evidence-based practices that help ensure resources are used effectively to meet the standard of student outcomes identified in the *Leandro* ruling. Research and experience indicate that increased spending alone will not produce improved student outcomes without attention to how the resources are distributed and used.

Though this study cannot know the choices of policymakers and practitioners about the use of these resources, the study's findings and recommendations provide guidance on how to effectively distribute, use, and monitor K–12 funding.

This section of the report — Finance and Resource Allocation: Critical Needs — identifies ways in which the state should change the distribution of its funding system to direct additional resources to serve student populations such as economically disadvantaged students, English learners, and exceptional children. This would mean that greater resources are provisioned to school districts and schools serving the highest-need populations.

The report also provides guidance on the use of current and additional resources in the Qualified and Well-Prepared Teachers and Qualified and Well-Prepared Principal Critical Need areas. Further, data collected for both the professional judgment panels and the needs assessment suggest that funding is also inadequate for specific resources. For example, across the three independent professional judgment panels, a few broad resource allocation priorities were identified, including the provision of the following (not necessarily in order of priority):

- » A supportive school climate, including mental health supports and social-emotional learning
- » Access to adequate technology, to STEM (science, technology, engineering, and math) learning, and to the preparation to contribute to the 21st-century workforce
- » Effective professional development and incentives to improve and maintain educator quality
- » Sufficient educator-to-student ratios to provide for an effective learning environment and differentiated instruction

Finally, the report identifies that the implementation of the recommendations of this report necessarily must be measured, monitored, and acted upon to ensure that resources are having the intended impact on learning. Such monitoring and close attention to how resources are being distributed and used can inform future actions of both policymakers and practitioners about the necessary level of, and effective use of, resources.

Recommendations

- ✿ 1. Increase cost effectiveness of the North Carolina funding system so that public education investment prioritizes higher-need students and provides appropriate flexibility to address local needs.
 - » Keep the allotment system due to widespread popularity, particularly the teacher allotments, but lift the transfer restrictions to allow more flexibility for school districts.
 - » Revise the state’s funding system so that current and additional funding is distributed to students with the greatest need. In order to do this:
 - Add weights to the position allotments to account for higher-need student groups.
 - Increase the cap on exceptional children funding.
 - Revise the central office allotment calculation.
 - Base funding for limited English proficient students on the number of identified students in the district, not the percentage.
 - Provide accountability and guidance for local systems to effectively align resources with local students’ needs.
 - » Make transparent the level of resource investment in North Carolina school districts to increase understanding about how state funding is helping to offset inequities in local contributions to school systems.¹⁹ In order to do this, the state could take steps such as the following:
 - More clearly articulate the amount of funding needed per student above the base for higher-need populations (such as English learners, exceptional children, and economically disadvantaged students).
 - Enable an online side-by-side comparison feature that can show explicitly how state funds are helping to offset the lack of revenue-raising capacity in low-wealth communities.
 - Propose three to five metrics that are tracked over time to measure investment and outcomes, such as:
 - o Percentage weight of additional funding for higher-need populations
 - o Measures of equitable distribution of dollars
 - o Teacher salary relative to national benchmarks
 - » Continue to increase flexibility by lifting restrictions on a number of critical allotments so that district leaders can make resource allocation decisions based on local needs.
 - » Collapse allotments other than position allotments and allotments for higher-need students.

¹⁹ The NCDPI has begun to include some information about individual school district finances, searchable by county via: <https://gdacreporting.ondemand.sas.com/srcfinance/>.

- » Study and expand the flexibility provisions under HB489 to enable a diversity of school systems to understand how flexibility in resource allocation can benefit local systems.

• 2. Modify the school finance system to ensure future stability in funding for public education, including predictable, anticipated funding levels that acknowledge external cost factors.

- » Establish a policy that accounts for annual increases in cost within the state's school funding formula.
- » Create guardrails on the level and timing of funding distributed to school districts in the future to ensure more predictability for school systems.
- » Incorporate factors into the school finance formula that account for regional differences in cost and that include adjustments for necessary small schools/districts and for low-wealth communities.
- » Revise the funding mechanism for charter schools so that funds are distributed directly from the state rather than funneled through public school districts.
- » Phase in a student-weighted funding formula, collapsing all remaining allotments aside from the position allotments.

• 3. Increase the overall investment in North Carolina's public schools first by identifying a small number of foundational, high-impact investments. Continued investment in these foundational areas are most critical to setting the system up for success in the future.

- » Once a small number of investments have been identified and made, establish a routine that creates an opportunity for North Carolina to revisit these investments, their impact, and future actions to further the state's stride toward meeting the tenets of *Leandro*. Some examples of these investments include:
 - Early childhood staff compensation and time
 - Reframing of teacher supply pipeline and compensation
 - Principal preparation
 - Whole-child support, such as counselors and social workers
- » Establish a mechanism for continually updating state funding amounts to account for annual rising costs.
- » Provide funds for the necessary resources identified by the professional judgment panels, including additional staff positions, professional development, funding for technology and other materials, and additional supports for higher-need students.

A Qualified and Well-Prepared Teacher in Every Classroom²⁰



Critical Need: Provide a qualified, well-prepared, and diverse teaching staff in every school. Working conditions and staffing structures should enable all staff members to do their job effectively and grow professionally while effectively supporting the academic, personal, and social growth of all their students.

Research Topics and Approach

Several study teams examined the current and past status, policies, and programs for providing a qualified and well-prepared teacher in every North Carolina classroom, with respect to:

- » Educator supply, demand, and quality
- » Mobility and attrition of teachers from different pathways and in different types of schools and parts of the state
- » Access to fully prepared and experienced educators for all students, in particular those who have been historically underserved
- » Professional environments in place to support the growth and development of teachers
- » Retaining and extending the reach of high-quality teachers

The research methods for these studies included reviews of prior research; analyses of existing North Carolina administrative data sets and survey data from the National Center for Education Statistics; data from an original survey sent to every principal in the state; perceptual data from interviews and focus groups with teachers, principals, superintendents, and other district and state professionals from across the state; and other extant data.

²⁰ These findings are drawn from the following research reports, produced as part of this series: *Developing and Supporting North Carolina's Teachers* (Minnici, Beatson, Berg-Jacobson, & Ennis, 2019); *Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations* (Darling-Hammond et al., 2019); *How Teaching and Learning Conditions Affect Teacher Retention and School Performance in North Carolina* (Berry, Bastian, Darling-Hammond, & Kini, 2019); and *Retaining and Extending the Reach of Excellent Educators: Current Practices, Educator Perceptions, and Future Directions* (Smith & Hassel, 2019). Briefs summarizing each report can be found in in Appendices A–K.

Findings

***Every student deserves a great educator, not by chance, but by design
(Fisher, Frey, & Hattie, 2016, p. 2).***

North Carolina had a very robust support system for developing and supporting the teacher workforce through reforms and investments in the 1980s and 1990s. That system included:

- » Incentives for strong candidates to prepare for, enter, and stay in teaching through the North Carolina Teaching Fellows and Principal Fellows programs
- » Rigorous standards for teacher preparation, including strong accreditation requirements, and supports for high-quality clinical training
- » Mentoring and induction for beginning teachers
- » Rich professional development offerings for teachers, in part through the North Carolina Center for the Advancement of Teaching and the North Carolina Teacher Academy, as well as intensive supports for learning at the local level
- » Teacher compensation approaching the national average, incorporating recognition of National Board certification

Investments in these types of support paid off, as North Carolina had a well-qualified teaching force in virtually all communities. Furthermore, teachers prepared in North Carolina universities are more effective and much more likely to stay in teaching than those entering through other pathways, with North Carolina Teaching Fellows at the top end of the effectiveness and retention scale (Henry et al., 2014). There was a period of time in the 1990s when North Carolina had virtually eliminated teacher shortages and had the greatest gains in student achievement of any state, along with the greatest narrowing of the achievement gap. However, most of the elements of this teacher workforce support system have been reduced or eliminated.

Current Status of the Teaching Workforce

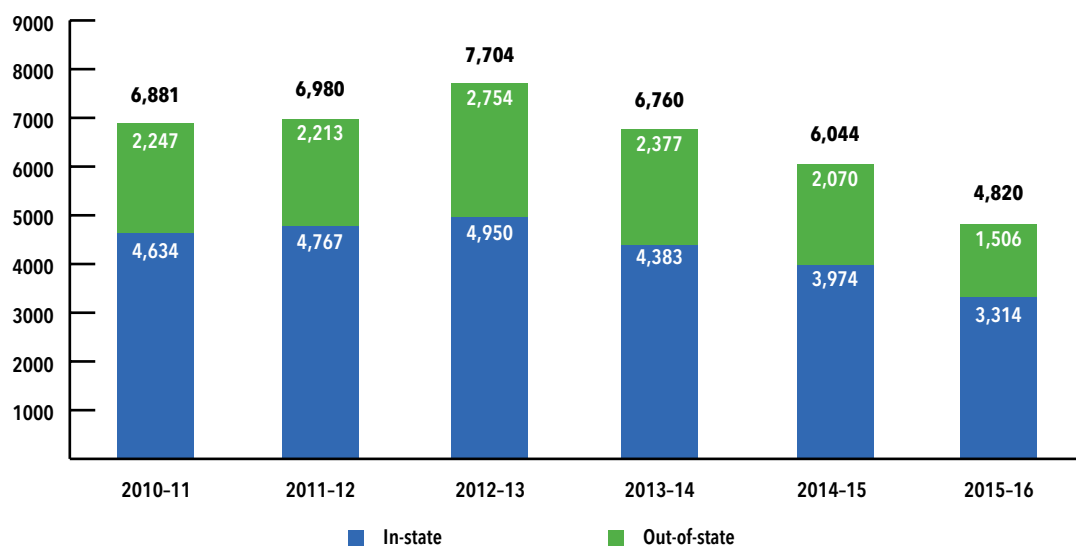
North Carolina has gone from having a very highly qualified teaching force, as recently as a decade ago, to having one that is extremely uneven in terms of the numbers of candidates; the quality of teacher preparation, particularly for teaching in high-poverty schools; the extent to which the teachers have met standards before they enter teaching; and teachers' growth and development once they enter the classroom. The following findings illustrate North Carolina's challenges and gaps to ensure a well-prepared, qualified, and effective teacher workforce.

❖ Finding #1: Teacher supply is shrinking, and shortages are widespread.

Budget cuts reduced the total number of teachers employed in North Carolina by 5% from 2009 to 2018, even as student enrollments increased by 2% during that span. As the size of the workforce has shrunk, teacher shortages

are becoming more widespread. The number of teacher credentials issued between 2011 and 2016 declined by 30% (see Exhibit 34). Meanwhile, annual teacher attrition, at 8.1%, is higher in North Carolina than the national average. As a consequence of high turnover and declining supply, the state reported 1,621 teacher vacancies that could not be filled by qualified teachers during 2017–18, with the greatest numbers in positions for teachers of exceptional children at all levels, elementary teachers, math teachers, and CTE teachers.

Exhibit 34. Teachers credentialed from in-state and out-of-state programs, 2010–11 through 2015–16



Source: U.S. Department of Education (2017)

Attrition, vacancies, and the hiring of unqualified teachers are highest by far in high-poverty communities, with particularly challenging conditions in the northeast region of the state. Vacancy rates were 12% or higher in Anson and Northampton counties, for example.

❖ Finding #2: The average quality of teachers entering the workforce has declined.

The proportion of teachers in North Carolina who are not fully licensed has doubled since 2011, from 4% to 8%, and in high-poverty schools, as many as 20% of teachers are unlicensed. The sources of teacher supply have shifted dramatically over recent years, with 25% of candidates now entering through alternative routes (i.e., lateral entry) without preservice preparation, and only 35% of the state’s teachers are entering through North Carolina colleges and universities — a share that was as high as 60% in 2001 and 50% in 2010 (Bastian & Goff, 2017).

These changes in the sources of teacher supply are important because there are major differences in the effectiveness and retention of teachers from these different pathways. Researchers have found that North Carolina–prepared teachers are generally significantly more effective than those prepared out of state and they stay in North Carolina schools at much higher rates (Henry et al., 2014) (see Exhibit 35). This may be in part related to the reforms described above, which required North Carolina schools of education to become nationally accredited and leveraged much stronger licensing and teacher education practices in North Carolina.

Exhibit 35. Retention rates in teaching at three and five years' experience, by teacher preparation pathway

Teacher preparation pathway	Three-year retention rate	Five-year retention rate
University of North Carolina system	85%	72%
North Carolina private institute of higher education	83%	69%
Out of state	66%	48%
Lateral entry	65%	48%
Visiting international faculty	68%	49%
Teach for America	24%	7%
Unclassified	75%	65%

Source: University of North Carolina System Educator Quality Dashboard (2011)

Meanwhile, lateral-entry teachers — other than the tiny proportion who are Teach for America recruits — are significantly less effective than teachers who have been prepared before entry, and they leave teaching at much higher rates. Most of these teachers are concentrated in high-poverty schools.

✦ Finding #3: Experienced, licensed teachers have the lowest annual attrition rates.

These patterns of underprepared teachers leaving the profession are obvious as well in more current annual attrition rates. In 2017–18, experienced, licensed teachers had the lowest annual attrition rates, at 7%. Teach for America teachers had the highest attrition rates, at 28%, and the attrition rate for other lateral-entry teachers was 15%, more than twice the rate for certified entry teachers (Public School Forum of North Carolina, 2018). These differences in attrition rates mirror national trends, which show that teachers without prior preparation leave the profession at two to three times the rate of those who are comprehensively prepared (Ingersoll, Merrill, & May, 2014).

These attrition rates have noticeable effects on student learning, both as they influence levels of experience, which positively influence achievement, and as they affect rates of school turnover, which negatively affect achievement (Podolovsky, Kini, & Darling-Hammond, in press; Ronfeldt, Loeb, & Wyckoff, 2013). The pathways that are associated with considerable churn in schools are, unfortunately, the ones that have been growing in recent years.

✦ Finding #4: Teacher demand is growing, and attrition increases the need for hiring.

The North Carolina Department of Commerce (2018) estimates that the total number of teacher positions in K–12 schools will grow 4.6% between 2017 and 2026. The highest rate of growth is expected in kindergarten teacher positions, followed by middle school and secondary school positions (exclusive of CTE positions). In addition, legislation mandating class-size reduction for grades K–3 will further increase the demand for teachers at those grade levels. Overall, the total number of openings, including those for teachers who will need to be replaced, is expected to be 72,452 by 2026.

As is true nationally, nearly all of this demand is expected to be the result of teacher attrition. The combination of exits from the state workforce and transfers to nonteaching jobs is 93% of the expected additional demand. If this attrition could be cut in half (which would then reflect the attrition rates in the New England states and in a number of high-achieving countries), shortages could be eliminated. However, current conditions in North Carolina are pointing in the opposite direction, as 10% of teachers say they plan to leave teaching as soon as possible, compared with about 7% of teachers nationally.

Attrition is highest in high-poverty districts, such as Warren County Schools, Halifax County Schools, Thomasville City Schools, and Vance County Schools. Warren County Schools lost one third of its teaching force in 2017–18; the more affluent Macon County lost only 4%.

❖ **Finding #5: Changes to the North Carolina Teaching Fellows program have decreased its ability to positively improve the quality and supply of the North Carolina teacher workforce.**

To ensure that good candidates could be recruited and could afford to enter teaching, in 1986, North Carolina launched an aggressive fellowship program to recruit hundreds of able high school students into teacher preparation each year. The highly selective North Carolina Teaching Fellows program — still in operation in a modified form at a reduced level — paid all college costs, including an enhanced and fully funded teacher education program, in return for several years of teaching. The program expanded the teaching pool by bringing a disproportionate number of males, minorities, and math and science teachers into the profession. One study found that after seven years, retention rates in teaching for these recruits exceeded 75 percent, with many of the other alumni holding positions as principals or central office leaders (National Commission on Teaching and America’s Future, 1996). Another study found that North Carolina Teaching Fellows teachers were among the most effective teachers in the state, even more effective than graduates of the North Carolina university system (Henry, Bastian, & Smith, 2012).

In 2011, the legislature canceled the state’s very successful North Carolina Teaching Fellows program. A longitudinal study of the prior version of the program, which began in 1986 and recruited nearly 11,000 candidates into teaching, found that these fellows not only had higher rates of retention compared with their peers, but also were generally more effective educators, as measured by test score gains of their students (Henry, Bastian, & Smith, 2012). In 2018, the state reinstated a scaled-back version of the program, with \$6 million to serve 160 teacher candidates annually and only \$8,250 per year allocated for tuition, with no allocation for additional special training.

❖ **Finding #6: Salaries and working conditions influence both retention and school effectiveness.**

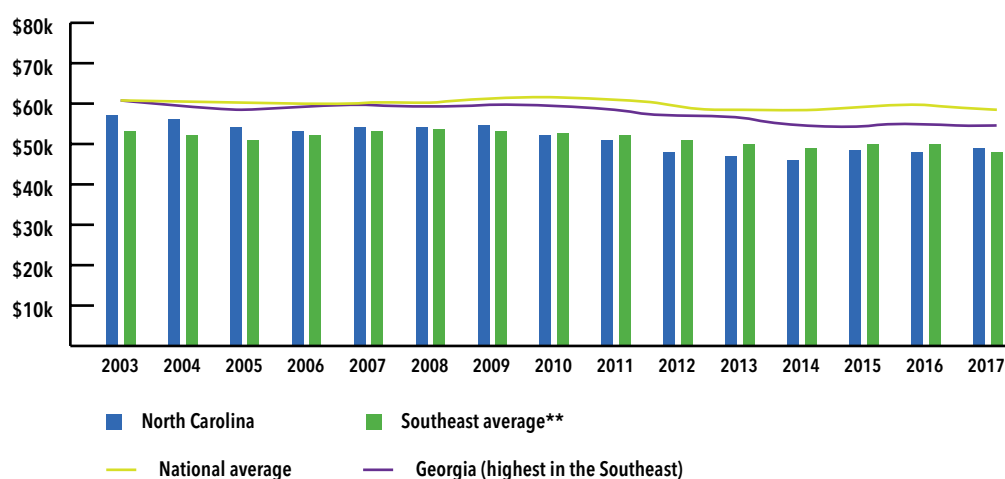
In national research, teacher attrition is typically predicted by four factors:

- » The extent of preparation to teach
- » The extent of mentoring and support for novices
- » The adequacy of compensation
- » Teaching and learning conditions on the job

As noted above, the extent of preparation influences teacher attrition in North Carolina. Furthermore, among the effects of prior budget cuts in North Carolina have been not only reductions in salary, but also cuts to the state mentoring program and deterioration in working conditions, all of which can discourage individuals from entering and remaining in teaching.

After climbing for many years as part of a campaign by the state to reach the national average, teacher compensation began falling in North Carolina after 2008, losing ground against both national benchmarks and the salaries in other southeastern states (see Exhibit 36).

Exhibit 36. Average annual K–12 teacher salaries, 2003–2017 (in constant* 2017 dollars)



Source: National Education Association, *Estimates of School Statistics*, selected years, 2004–05 through 2016–17

* Constant dollars are based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor. ** Southeastern states include Alabama, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

In the 2017–18 school year, beginning teachers’ average starting salaries in North Carolina were 29th in the nation, at \$37,631 (National Education Association, 2018b). Overall, the average salary for teachers in North Carolina ranks 37th in the nation (\$50,861 vs. \$60,483) (National Education Association, 2018a). Although North Carolina once led the southeastern states in teacher pay, it now lags most of its neighbors in average pay.

In interviews, the research team heard about the effects of declining salaries and working conditions throughout the state. One middle school teacher described his situation as follows:

“I know people who have worked gas stations at night and teach all day. [I]f I didn’t coach those three sports and get extra money from that, I’d have to go work another job.”

Another middle school teacher shared her future plans:

“I don’t [see myself here in five years or in the profession] ... because we’re a household of two teachers. It’s just not feasible moneywise for both of us to teach.”

In multivariate statistical analyses of the predictors of teacher retention, the research team found that the size of the teacher salary supplement (i.e., additional funds provided by some local education agencies (LEAs) to account for variances such as geographic location, market conditions, and school demographics) was a significant predictor of retention. Working conditions predictive of teacher retention include strong teacher and school leadership, high-quality professional learning and collaboration, community support and parent engagement, teachers' high self-efficacy and collective efficacy, adequate time for teaching, and a positive school climate.

In these analyses, intensive use of test scores to inform instruction had a negative association with teacher retention, perhaps because schools that feature strong pressure to raise scores create a less positive climate. An earlier study in North Carolina found that the rating system associated with the state's accountability system triggers higher attrition of teachers from schools that receive a low rating, holding other factors constant (Clotfelter, Ladd, Vigdor, & Aliaga-Diaz, 2004). Similarly, in the national Schools and Staffing Surveys, the most frequently cited reason for leaving the profession in 2012, during the No Child Left Behind era, was dissatisfaction with student testing and accountability, cited by 25% of teachers who left.

Almost all of these factors have even stronger associations with teacher retention in high-poverty schools. As teachers discussed their working conditions, the research team heard concerns such as these:

"They try to address it, but unfortunately, funding is not there — that's what we are told. For instance, ... we don't have textbooks, we need to make copies of reading selections to teach those kids. We only get, like, 1,500 copies per nine weeks. ... [W]e [use] our own money, we have to buy cartridges for our printers to print this." (Middle school teacher)

"I do enjoy being in the classroom, but this is a very high-stress environment in general. ... While I love what I do, ... I can't justify it and say it's worth it. It's not a long-term thing. ... There's no way I can sustain this for a long time." (Middle school teacher)

Our analysis found that teaching and learning conditions are also powerful in predicting the likelihood of a school exceeding its growth target on the state assessments, relative to not meeting the target. Across all schools, teachers' collective practices and efficacy and student conduct are positively associated with meeting expected growth (relative to not meeting growth). These two factors also predict the school's probability of exceeding its growth target, as do teacher and school leadership, community support and parent engagement, time for teaching, and student assessment data. There are not major differences between low- and high-poverty schools in how school working conditions predict schools' ability to exceed achievement growth targets.

Meeting the Needs of a Diverse Student Population

❖ **Finding #7: Although there has been an increase in the number of teachers of color in teacher enrollments, the overall current teacher workforce does not reflect the student population.**

Although teachers of color now comprise about 30% of teacher enrollments, which is an increase, many of these teachers — particularly African American and Native American recruits — are primarily entering through

alternative routes, which have much higher attrition rates. One reason for this is the steep drop — more than 60% between 2011 and 2016 — in teacher education enrollments in minority-serving institutions, including historically Black colleges and universities.

Teachers of color are an important resource, as recent research — much of it conducted in North Carolina — has found a positive impact of having a same-race teacher on the long-term education achievement and attainment of students of color, particularly for African American students (e.g., Dee, 2004; Gershenson, Hart, Lindsay, & Papageorge, 2017). North Carolina’s current teacher workforce, however, has only about 20% teachers of color, although more than half of the state’s students are students of color.

✦ **Finding #8: Disadvantaged students in North Carolina have less access to effective and experienced teachers.**

Every child in North Carolina deserves an effective teacher. For students who come from underserved populations, an effective, experienced, and qualified teacher is even more critical to their educational success. Yet the promise of a competent, certified, well-trained teacher is too often left unfulfilled for economically disadvantaged students and students of color. Such students in North Carolina have less access to effective and experienced teachers; the least effective teachers are more highly concentrated in North Carolina’s highest-poverty schools. Along with the fact that the less effective lateral-entry teachers are concentrated in high-poverty schools, in 2017, 15% of teachers in the highest-poverty schools were rated “Needs Improvement” by the North Carolina Educator Effectiveness System, compared with only 10% of teachers in the lowest-poverty schools.

The gap in access to more effective teachers is even wider in schools serving greater percentages of students of color. In 2017, 17% of teachers in schools with the greatest proportion of students of color were rated “Needs Improvement,” compared with only 10% of teachers in schools with the lowest proportion of students of color. Closing achievement gaps requires that students who are struggling have access to the *most* effective teachers. Yet economically disadvantaged students and students of color are taught at lower rates by teachers designated as “Highly Effective.”

An examination of teacher experience reveals the same disconcerting patterns. The highest-poverty schools and schools with the highest proportions of students of color employed higher percentages of teachers with fewer than three years of experience. In 2017, 15% of teachers in the highest-poverty schools were inexperienced, compared with only 9% of teachers in the lowest-poverty schools. Again, the gap in access to experienced teachers is even wider for students of color. In 2017, 17% of teachers in schools with the greatest proportion of students of color were inexperienced, compared with only 7% of teachers in schools with the lowest proportion of students of color.

Ensuring that all students, but particularly students of color and EDSs, have access to effective and experienced teachers is critical to their academic success and to closing persistent achievement gaps (TNTP, 2012). However, these data clearly demonstrate that students of color, EDSs, and students in high-poverty schools in North Carolina are all less likely to have access to effective and experienced teachers.

Supporting Teachers' Professional Growth

- ❖ **Finding #9: Access to, and the quality of, professional learning opportunities vary across schools and districts, and state-level efforts that support teacher growth and development are inadequate and inequitable.**

There is some evidence of professional learning opportunities in almost every school and district environment, but the frequency, approach, and overall quality of those opportunities vary. The once-extensive infrastructure and funding for professional learning in North Carolina has been greatly reduced, and many teachers report that what is being offered often fails to meet the standards of high-quality professional learning, which is sustained over time, features active learning and collaboration for teachers, is content-focused and job-embedded, and has opportunities for developing new practices supported by coaching and reflection (Darling-Hammond, Hyler, & Gardner, 2017).

There has been a significant decrease in funding and support for professional learning for teachers over the past decade, resulting in reduced capacity to provide adequate professional development for teachers. Due to cuts in funding and capacity at the state level, there is limited availability of high-quality professional learning opportunities for teachers. Many principals and superintendents interviewed by the research team reported that there is a lack of support and funding from the NCDPI to provide high-quality professional learning opportunities for teachers.

Superintendents that were interviewed noted that professional development is critical to recruiting, developing, and retaining teachers. However, they also reported significant barriers to implementing high-quality programs. Specifically, participants noted that the state does not fund professional development and that mentor pay has been cut. Furthermore, low-wealth districts have fewer local funds to use to provide extended professional learning opportunities for staff. For example, low-wealth districts have fewer resources to find substitutes so teachers can attend professional development sessions and have less money to pay for teachers' time outside school hours or for travel to conferences.

- ❖ **Finding #10: Changes to North Carolina's New Teacher Support Program have limited its ability to effectively support North Carolina's new teacher population.**

The university-based New Teacher Support Program (NTSP) is an induction model aimed at helping novice teachers in the state's lowest-performing schools acquire the knowledge and skills necessary to raise the quality of their instruction, increase student achievement, and persist in teaching in their lowest-performing schools (Bastian & Marks, 2017). Out of approximately 15,500 new teachers (with three or fewer years of experience), the program currently only serves about 1,000. Recent changes by the state's General Assembly decreased funding for program administration, and individual districts bear the burden of paying \$2,200 per novice teacher to participate. Furthermore, the NTSP currently partners with only nine institutions of higher education (IHEs) to deliver services, limiting the program's capacity and reach; none of the current IHE partners is a minority-serving institution. Thus, despite the NTSP's combination of components that research confirms has a positive impact on

teacher practice and student outcomes, the current configuration of the program has a limited ability to positively support all of North Carolina's beginning teachers, which is critical to enabling those teachers to effectively support their students' academic achievement.

❖ **Finding #11: Teachers are often not compensated for taking on advanced teacher-leader positions, though these positions have been shown to support their professional growth and help retain new teachers.**

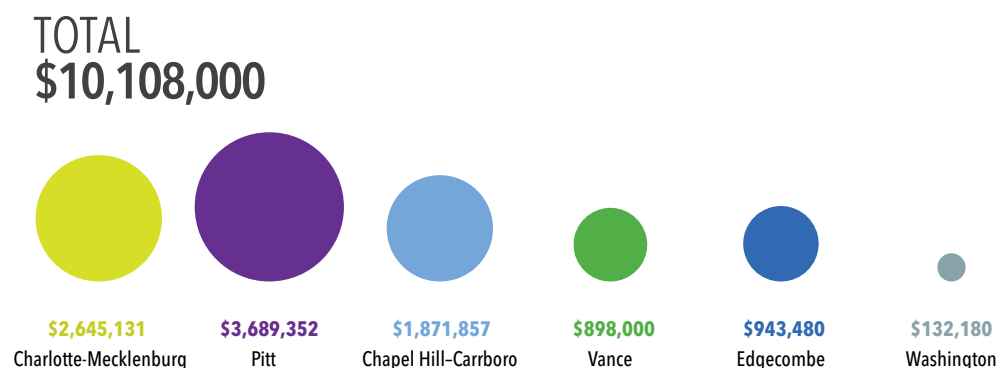
Positions such as instructional coaches and multi-classroom leaders provide opportunities for great teachers to advance in their professions without leaving the classroom. However, only advanced teacher-leader positions, like the multi-classroom leader role, provide guaranteed higher pay. Instructional coaches are still paid according to the state teacher salary schedule.

Interviewees found the idea of higher compensation particularly appealing and noted that many teachers are often deterred from pursuing leadership opportunities because they aren't associated with greater pay. In fact, this lack of compensation for teacher-leader roles was mentioned much more often by participants from *Leandro* plaintiff districts than non-*Leandro* districts. Approximately 69% of respondents from *Leandro* districts mentioned "no extra compensation for additional responsibilities" as a concern.

Research indicates that advanced teacher-leader roles, wherein great teachers provide consistent instructional support and foster a collaborative culture of improvement, can also be an effective means of retaining beginning teachers. In addition, these leadership roles create new opportunities for teachers to remain in the classroom, which can improve retention among more experienced educators who might have otherwise changed careers or transitioned into administration. However, it is crucial that these roles be tied to greater compensation.

North Carolina has provided two rounds of funding, to a total of 10 districts, for the Teacher Compensation and Advanced Roles pilot, which gives districts funding to pay teachers more for advanced teaching roles. Most teachers, however, continue to work in schools that do not have advanced teaching roles like those in the pilot districts. In the first round of competition, 12 LEAs applied to participate, but the NCDPI accepted proposals from only six. Exhibit 37 lists original pilot participants, along with the total funding each received.

Exhibit 37. Funding for original Teacher Compensation and Advanced Roles pilot sites



Source: Smith & Hassel, 2019

The Friday Institute's evaluation of the Teacher Compensation and Advanced Roles pilot found that the program shows early signs of success, including positively impacting classroom instruction; elevating attractiveness of the teaching profession; promoting implementation of more rigorous selection processes; improving retention for teachers who may have considered transitioning to a different role outside teaching; providing helpful support to beginning teachers; and contributing to improved empowerment and confidence among teacher-leaders (Stallings, Maser & Steinbrecher, 2018). The Friday Institute also identified some areas of concern, including that in some pilot districts, especially rural ones, new advanced positions could be difficult to staff even with higher levels of compensation.

Recommendations

North Carolina can never succeed in providing a sound basic education for its children without vastly improved systems and approaches for recruiting, preparing, supporting, developing, and retaining teachers and for placing highly effective teachers where they are most needed to foster the academic growth of at-risk students. The current teacher shortages and high turnover — particularly in high-poverty schools — are a function of uneven preparation and mentoring, inadequate compensation, and poor working conditions. Given the findings summarized above, providing a qualified, well-prepared, and effective teacher in every classroom poses an enormous challenge, which will require a systemic, multifaceted approach that continues across years to build and maintain the teaching workforce needed throughout the state. Specific recommendations for actions are described below. Note that this is not intended to be a menu of options — synchronous and coordinated action is needed on all the major recommendations for North Carolina to reverse recent trends and meet the *Leandro* requirement.

1. Increase the pipeline of diverse, well-prepared teachers who enter through high-retention pathways and meet the needs of the state's public schools.

North Carolina-trained teachers have the highest levels of effectiveness and retention of any major pathway in the state. Cutbacks in incentives for teaching and in capacity to prepare and retain teachers have produced shortages,

which are often filled by lateral-entry teachers, who have the lowest levels of effectiveness and retention. The state needs to strengthen capacity within North Carolina’s teacher preparation programs, both public and private, and increase the number of teacher graduates. The recommendations below have been found effective in North Carolina and other states for increasing the pipeline of diverse, well-prepared teachers who stay in teaching.

- » Provide support for further building and updating the capacity of UNC-system teacher preparation programs to recruit and prepare more of the well-prepared teachers needed in the coming years:
 - Increase the number of in-state trained and credentialed teachers to 5,000 teachers annually to return the state to its former levels of teacher preparation.
 - Use licensing and accreditation rules (which provide guidelines for what programs must provide and candidates must learn) plus improvement grants to programs to leverage strong clinical training and learning for standards-based, culturally responsive, trauma-informed teaching that can attend to students’ social, emotional, and academic development.
 - Review state teacher testing requirements to ensure (1) that any testing barriers to entry that are unrelated to capacity to teach effectively are removed and (2) that there are multiple ways to demonstrate competency.
- » Provide targeted funding to support increasing capacity and enrollment of teacher preparation programs at minority-serving institutions to help diversify the teaching workforce in light of the positive effect that teachers of color have on the achievement of students of color and the precipitous decline in teachers of color prepared through the UNC system’s minority-serving institutions over the past several years.
- » Expand the role of the Professional Educator Preparation and Standards Commission, which was established by the North Carolina legislature in 2017 to involve stakeholders in establishing high standards for North Carolina educators and to make recommendations regarding all aspects of preparation, licensure, continuing education, and standards of conduct of public-school educators. This commission can play a valuable role in making specific recommendations about strengthening and diversifying North Carolina’s teacher workforce.

2. Expand the North Carolina Teaching Fellows program.

As noted in the Findings section above, the original North Carolina Teaching Fellows program, which operated from 1986 to 2011, was very successful in recruiting highly qualified and effective teachers who remain in the profession longer than other teachers.

The current Teaching Fellows program, reinstated in the 2018–19 school year, focuses on recruiting teachers for high-need content areas — currently, mathematics, science, and special education — and provides for a quicker payback of the scholarship funding for those who teach in low-performing schools. There is a solid foundation and an administrative structure in place that can support an expanded program. Specific recommendations for a major expansion of this valuable and proven-effective program include the following:

- » Increase the overall funding to support more Teaching Fellows to help reverse the overall decline in well-prepared teachers in the state and set a goal of increasing the number of candidates from 200 to 1,000 within three years and to 1,500 within five years.
- » Increase the number of eligible teacher preparation programs from the current five to include programs that serve the different regions of the state and to include minority-serving universities in order to help increase the diversity of the teaching workforce.
- » Reinstate the additional leadership training the participants in the Teaching Fellows program previously received and include training in topics such as culturally responsive teaching, teaching students with disabilities, and trauma-informed teaching.
- » Provide the shorter payback period (contingent on a four-year teaching commitment overall) for those who teach in any high-poverty school, not just schools that are low performing, to incentivize Teacher Fellows to teach in those schools.
- » Develop recruitment strategies that inform and attract candidates of color to apply to be Teaching Fellows.

3. Support high-quality teacher residency programs in high-need rural and urban districts through a state-matching grant program that leverages ESSA Title II funding.

High-quality residency programs provide teacher preparation candidates with a full year of postgraduate clinical training in a university–school district partnership program that provides financial support (e.g., a salary or stipend) tied to earning a credential at the end of the year and a commitment to remain teaching in the district for three to five years. These residency programs have been successful in recruiting diverse candidates who then have high rates of retention in high-poverty schools (Guha, Hyler, & Darling-Hammond, 2016).

North Carolina already has some successful partnership programs that can provide models for others, such as the North Carolina A&T Teacher Residency partnership with Randolph County Schools and Stokes County Schools. This program uses a cohort model; provides a yearlong immersive teaching experience; and focuses on culturally relevant pedagogy, assessment-driven instruction, and higher-order thinking engagement (Carver-Thomas, 2018). North Carolina can use its federal Title II funds under ESSA as an initial pool of resources to support state-matching grants that would create more such partnerships in high-need communities and add state funds as they become available.²¹

21 The lateral-entry pathway in North Carolina is being replaced with the Residency Model pathway, which is different from the teacher residency programs described here and does not have the same features. The Residency Model pathway includes a one-year license, renewable twice, that meets the following requirements: (1) is requested by the local board of education and accompanied by a certification of supervision from the recognized educator preparation program in which the individual is enrolled; (2) the individual for whom the license is requested meets all of the following requirements: holds a bachelor's degree, has either completed coursework relevant to the requested licensure area or passed the content area examination relevant to the requested licensure area that has been approved by the State Board of Education, and (3) is enrolled in a recognized educator preparation program; and meets all other requirements established by the State Board of Education, including completing preservice requirements prior to teaching (<http://www.ncpublicschools.org/epp/lateral/>).

● 4. Provide funding for Grow-Your-Own and 2+2 programs that help recruit teachers in high-poverty communities.

Grow Your Own teacher preparation programs recruit and train local community members, career changers, paraprofessionals, after-school program staff, and others currently working in schools. Drawing on the “pull of home,” local graduates and community members offer a sustainable solution to teacher shortages while also often increasing the diversity of the teacher workforce. Grow Your Own programs are underway in many states, including Alaska, Arkansas, California, Colorado, Delaware, Minnesota, Mississippi, Pennsylvania, and South Carolina (Espinoza, Saunders, Kini, & Darling-Hammond, 2018).

2+2 programs help candidates begin in local community college, with a well-articulated and streamlined path to completion of a teaching credential in a university teacher preparation program with a clinical practicum in their local schools.

Several types of programs have been successful in engaging and preparing individuals to become teachers in the communities in which they live. Further state support for these programs is warranted to help address the teacher shortage in rural high-poverty communities. These programs include the following:

- » 2+2 partnership programs, like the one that partners Halifax County, Halifax Community College, and Elizabeth State University, make teacher preparation more affordable and accessible to students, help diversify the teacher workforce, and provide the schools with teachers who have strong connections to their communities. A state grant program would incentivize and support such partnerships to develop collaborative 2+2 programs designed to recruit teachers from rural and urban areas; to diversify the teaching workforce; to prepare teachers to work successfully with at-risk students; to enable candidates to do their clinical practicums in their local schools; and to continue to support their graduates through their first years of teaching.
- » Teaching Assistant to Teachers programs, such as the one that has been successful in Northampton County, provide opportunities for those already working in schools as assistants to build upon their experience to become licensed teachers, often through community college pathways.
- » High school–based career academy programs, such as the North Carolina Teacher Cadet Program and Future Teachers of North Carolina, that encourage students to consider the teaching profession and enable them to take college courses in education and areas relevant to their teaching interests, with their tuition paid through the College and Career Promise legislation. These students are then well positioned to enter 2+2 partnership programs that involve one or more community colleges and school districts near where they live.

● 5. Significantly increase the racial-ethnic diversity of the North Carolina teacher workforce and ensure all teachers employ culturally responsive practice.

Increasing the pipeline of teachers of color is critical to improving the achievement of students of color in North Carolina.

In addition to the recommendations above to increase teacher education enrollments in and expand the Teaching Fellows program to minority-service institutions and to create teacher residencies that recruit and train teacher candidates of color, North Carolina can:

- » Set data-informed goals to increase the racial-ethnic diversity of the teacher workforce and annually and publicly report on multiple indicators of the diversity of the teacher workforce. Some examples of indicators across the teacher pipeline that should be included and publicly reported are the number of new teachers of color enrolled in educator preparation programs and the number of those who complete the programs; the retention and turnover rates for teachers of color; and the racial-ethnic diversity of teacher education faculty, mentor teachers, and other professional staff involved in the preparation of candidates.
- » Partner with LEAs to identify ways to be more intentional about recruiting and retaining a diverse teacher workforce, including conducting root-cause analyses to understand the underlying causes of teacher pipeline challenges and to identify solutions to address those root causes (e.g., addressing the training and support for school leaders responsible for hiring teachers, creating earlier hiring timelines, and including teachers of color in the hiring process).
- » Provide guidance and support for LEA talent officers and human resources staff on successful practices to ensure a diverse workforce, as LEAs often do not have the necessary resources and know-how to successfully recruit and retain teachers of color (Konoske-Graf, Partelow, & Benner, 2016; Palaich et al., 2014). This should include support related to recognizing implicit bias, implementing culturally responsive practices and high-touch recruitment practices, and creating inclusive cultures and strategic placement strategies for teachers of color.

● 6. Provide high-quality comprehensive mentoring and induction support for novice teachers in their first three years of teaching to increase both their effectiveness and their retention.

Teachers who are better prepared and better mentored stay in teaching at much higher rates and are more successful, especially in high-need environments. In addition to the recommendations that address teacher recruitment and preparation, it is essential that the state expand its efforts to mentor and support novice teachers, including the following:

- » Expand the New Teacher Support Program — which has demonstrated success in improving both the effectiveness and retention of novice teachers (Bastian & Marks, 2017) — so that it is able to support all new teachers. This program is currently operating at six UNC campuses and is serving only 1,100 of the 15,595 North Carolina teachers who have fewer than three years of experience.

- » Initially, expand the New Teacher Support Program expand the program to *all* first-year teachers (approximately 5,000). In years two through five, the program should expand to all teachers who have three or fewer years of teaching experience (approximately 15,500). As this program is expanded, it should ensure that mentors are well trained, are in the same field as mentees, and have released time that allows them to both coach novices in their classrooms and support their planning. The most well-developed programs also provide novices with a reduced teaching load and collaboration time with other teachers in their department or grade level. There would be a significant return on investment from increasing the scale of this program, in terms of increased teacher effectiveness, increased retention, and the savings resulting from needing to replace fewer teachers.
- » Require greater levels of mentor support and training for teachers of record who are not yet fully licensed, ensuring that they get access to the professional development and induction support they need and, ideally, begin to transition into programs that offer high-quality clinical training with wraparound coursework for a coherent, well-supported form of preparation.
- » Invest in addressing teaching and learning conditions that affect teacher retention and effectiveness, including principal preparation; professional development, collaboration, and leadership opportunities; and whole-child supports that enable teachers to better focus on instruction.
- » Provide North Carolina’s many National Board–certified teachers with opportunities, time, and incentives to serve as mentors to beginning teachers and instructional leaders in their schools. The state has more National Board–certified teachers than any other state — nearly 22,000 in 2018 (National Board for Professional Teaching Standards, 2018). Structures are needed to leverage these teachers’ talents and allow them to share their expertise, especially for supporting learning in high-poverty schools.

● 7. Implement differentiated staffing models that include advanced teaching roles and additional compensation to retain and extend the reach of high-performing teachers.

Recent research suggests that using advanced roles productively can increase instructional capacity within schools, thereby giving substantially more students access to effective teachers. In addition, principals benefit from a distributed leadership structure wherein they provide regular support to a team of teacher-leaders instead of an entire teaching staff. To build upon successful pilots and implement effective approaches of differentiated staffing models that include advanced teaching roles statewide, the NCDPI should:

- » Expand the Teacher Compensation Models and Advanced Teaching Roles pilot program to allow all districts to apply for one-time startup funds. In addition to dedicated state funding, encourage LEAs to blend/ braid existing funds (e.g., Title I and Title II funds) to help launch and sustain advanced teaching roles through this and other evidence-based models.
- » In order to improve recruitment and retention of highly qualified teachers in these schools, leverage the expertise of National Board–certified teachers by providing a multiyear stipend for those who teach in high-poverty schools for five years while also serving as mentors and instructional leaders.

- » Plan ongoing evaluation and improvement efforts to better understand the outcomes from advanced teaching roles in terms of student achievement and teacher retention. The NCDPI could support district and school learning about advanced teaching roles in three ways. First, it could collect and curate professional development resources from early-adopter districts. Second, it could provide ways for the school and district leaders to connect with each other and share what they are doing and lessons they have learned. One way to accomplish this would be to create venues for district leaders to share experiences, perhaps via in-person regional groups and across the state virtually. Finally, the NCDPI, in partnership with external parties, could draw on its wealth of data to answer questions that would help districts understand the impact of the advanced teaching roles and to suggest solutions to implementation problems.

8. Develop a system to ensure that all North Carolina teachers have the opportunities they need for continued professional learning to improve and update their knowledge and practices.

Since the completion of the Race to the Top grant in 2015, the state has significantly reduced its role in providing professional learning for educators, with a concomitant reduction in the professional learning staff at the NCDPI. Currently, many of the state's teachers, especially those in low-wealth districts, do not have ready access to the professional they need. The state cannot achieve the goal of a well-prepared, qualified, and effective teacher in every classroom without ensuring that teachers have high-quality, ongoing professional learning opportunities. The following recommendations address this critical need:

- » Expand the role of the Professional Educator Preparation and Standards Commission to include developing recommendations for how North Carolina can ensure that all educators have access to high-quality professional learning opportunities relevant to their needs.
- » Implement Learning Forward's Standards for Professional Learning to serve as guidance for the design and assessment of professional learning opportunities and to inform continuous improvement and future funding decisions. Although these standards were adopted by the North Carolina State Board of Education, the actions needed to implement them have not been identified.
- » Invest in building the capacity and infrastructure needed to support more personalized and job-embedded professional learning opportunities for teachers. Coordinate with the various entities across the state that provide professional learning to LEAs, such as colleges and universities and regional entities, to ensure teachers have access to a coherent system of high-quality professional learning.
- » Provide teachers with contractually obligated time and support to engage in high-quality professional learning opportunities that align with the needs of individual teachers, teacher teams, and schools.
- » Fund college and university partnerships with school districts to support content-focused, standards-based professional learning that is aligned with preservice efforts and available virtually as well as on-site.
- » Create a professional learning block grant for low-wealth districts and district collaboratives for the purpose of developing and growing teachers. To receive grants, LEAs would submit plans identifying high-leverage,

evidence-based strategies (e.g., instructional coaching, lesson study, professional learning communities) as well as outcomes tied to these strategies (e.g., number of teachers retained, improvements in instructional quality, increases in student achievement). Target these grants to high-need districts and schools with the amounts weighted by the numbers of at-risk students.

9. Increase teacher compensation and enable low-wealth districts to offer salaries and other compensation to make them competitive with more advantaged districts.

Local salary supplements make salaries unequal across districts and exacerbate inequalities in teacher recruitment and retention for low-wealth districts. Many factors make teaching attractive and affordable in different contexts, so it is useful to consider compensation broadly — benefits such as housing, loan repayment, child care, professional learning supports, and retention bonuses can strengthen recruiting and retention in high-need schools.

- » Increase teacher salaries to make them competitive with teacher salaries in other states in the region and with other career options that require similar levels of preparation, certification, and levels of experience. Set a goal and framework to increase the base teacher salary to match the national average by 2030.
- » Increase the funding allotments to low-wealth districts to enable them to offer teacher salary supplements that are competitive with those from other districts, to help remedy the migration of teachers from lower-paying to higher-paying districts.
- » Add financial incentives for the recruitment and retention of qualified teachers in high-need communities. These can include subsidized teacher housing, where needed, in rural communities by working with the State Employees Credit Union Foundation, the North Carolina Housing Finance Agency, and other relevant agencies. These incentives can also include student loan repayment, child care, tuition, National Board certification application costs, financial incentives for National Board–certified teachers to teach in high-poverty schools, and other benefits.

A Qualified and Well-Prepared Principal in Every School²²



Critical Need: Provide a qualified and well-prepared principal in every school. Principals should be prepared and supported to effectively lead continuous school improvement; support the use of a well-designed curriculum aligned with state standards; and establish a culture in which all students feel welcome, safe, supported, and challenged as learners.

North Carolina's judicial system recognized the critical role that school leaders play in providing every child with a sound basic education when the Supreme Court of North Carolina included as a *Leandro* requirement that:

every school be led by a well-trained competent principal with the leadership skills and the ability to hire and retain competent, certified, and well-trained teachers who can implement an effective and cost-effective instructional program that meets the needs of at-risk children so that they can have the equal opportunity to obtain a sound basic education by achieving grade-level or above academic performance. (Leandro, 1997)

The Court wisely emphasized the principal's role in hiring and retaining effective teachers as an important component in improving access to a sound basic education.

In 2018–19, North Carolina had 2,389 state-funded principal positions, 1,987 assistant principal positions, and 226 charter school principals, for a total of 4,602 school administrators (North Carolina Department of Public Instruction, 2019a). Statistically, school leadership is found to be the second most important school factor influencing student learning, after teacher effectiveness (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). Since effective principals are critical for recruiting and retaining excellent teachers and ensuring they have supportive working conditions and opportunities for professional growth, the importance of the principal to students' success goes well beyond what is found in the statistical analyses.

The need for effective leaders is especially important in persistently low-performing schools and high-poverty schools. Compared with other schools, these schools tend to have less-prepared and less-experienced teachers, much higher teacher turnover rates, students with additional needs, and fewer resources while also being faced with pressure to show increased student growth and proficiency each year. Research indicates that only with strong, talented leadership are these schools able to make the fundamental shifts in practice needed to increase positive outcomes for all students (Grissom, 2011).

However, in North Carolina, principals of high-poverty schools, on average, do not have the longevity in their schools necessary to make sustainable changes. A survey of the state's principals conducted for this project

²² The findings in this section are drawn from the following research reports: *Attracting, Preparing, Supporting, and Retaining Education Leaders in North Carolina* (Koehler, Peterson & Agnew, 2019); *Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations* (Darling-Hammond et al., 2019); *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities* (Oakes et al., 2019). Briefs summarizing each report can be found in the appendix.

showed that 64% of respondents who are principals in high-poverty schools have been the principal in their current school for three or fewer years and only 5% have been in place for 11 or more years. Data from 2016 and 2017 show that about 30% of principals in the highest-poverty schools left their school each year, as compared with about 17% in other schools, resulting in many high-need schools having a new principal each year.

Research Topics and Approach

The education leadership research team conducted data collection and analyses to examine evidence-based practices, identify key findings, and develop conclusions about the current status of education leadership in North Carolina. The study team identified the following key research questions to guide their work:

- » What is the current status of leader supply and demand?
- » What is being done to attract and prepare leaders?
- » What is being done to develop and support leaders?
- » What is being done to retain leaders?

To investigate the capacity of the state to ensure that every school is staffed by a well-trained principal, the researchers analyzed data from the following sources:

- » State data from the NCDPI on the educator workforce
- » Results from a 2018 online survey that was sent to every North Carolina public school principal and completed by 685 principals
- » Interviews conducted during 2018–19 with more than 60 public sector leaders and stakeholders with deep knowledge of the education leadership landscape in the state
- » Focus groups conducted during 2018–19 with 50 local school district superintendents, 33 local school board members, and 5 (of the 8) Regional Education Service Alliance directors
- » Interviews of elementary, middle, and high school principals during site visits to 13 school districts during the 2018–19 school year
- » Reviews of research and literature about evidence-based practices from national sources, as well as reviews and evaluations of North Carolina–specific programs
- » Reviews of data presented to the Governor’s Commission on Access to a Sound Basic Education

Findings

The investments made in the North Carolina education system at the end of the 20th century led to a robust system for developing and supporting the principal workforce, which, at the time, included:

- » Adopting strong certification standards for principal preparation programs
- » Providing incentives for principal candidates to prepare for, enter, and stay in school leadership through the Principal Fellows program
- » Establishing professional development for school leaders, in part through the Principal Executive Program
- » Providing compensation that was near the national average

The state continues to hold its preparation programs to high standards, and the Principal Fellows programs continues to be a strong part of the UNC system for developing school leaders. In addition, in 2010, North Carolina State University launched an innovative and now proven principal preparation program, the Northeast Leadership Academy, which has received national recognition for its quality and success. More recently, the Transforming Principal Preparation Program (TP3) has been added to the system to build the principal pipeline.

However, although the state has a solid principal preparation system in place, challenges remain. There has been a significant reduction in the numbers of candidates entering principal preparation programs over the past decade; many schools are led by inexperienced principals with fewer than three years of experience; and the current principal compensation structure may be a disincentive to becoming a principal, particularly for becoming a principal in a low-performing school. In addition, changes in the context within which schools operate — including technology advances, changes in the conditions and characteristics of children, and higher levels of accountability for student achievement — have increased demands on what principals need to know and be able to do. Findings from the studies related to the status of principal preparation, support, and retention in the state are summarized below.

❖ Finding #1: There is a strong evidence-based consensus about the elements needed for an effective principal preparation program, including one that prepares principals for high-need schools.

The researchers examined what is needed to develop and support principals to be effective leaders and to lead in schools that are low performing and that serve economically disadvantaged students. Research — including analyses of school performance data; surveys of school, district, and university administrators and educators; and reviews of exemplary programs — has led to a strong consensus that effective principal preparation programs need to incorporate 11 important elements (Wallace Foundation, 2016). The first element is to have programs that are aligned with strong standards. The National Education Leadership Preparation (NELP) standards from the National Policy Board for Educational Administration identify what novice leaders and preparation program graduates should know and be able to do after completing a high-quality education leadership preparation

program. The standards are aligned with recent national leadership practice standards and research on school leadership (National Policy Board for Educational Administration, 2018). These recent standards include areas that are not fully addressed in the North Carolina Standards for School Executives that were adopted in 2006 and updated in 2011. For example, the NELP standards include preparation of principal candidates for current and future school environments, which require “the capacity to evaluate, cultivate, and advocate for equitable, inclusive, and culturally responsive instruction ... and require clinical internship experiences within multiple school environments and a minimum of six months of concentrated (10–15 hours per week) internship or clinical experiences that include authentic leadership activities within a school setting” (National Policy Board for Educational Administration, 2018, p. 10). They also include specific standards for principal supervisors that provide a vision for the level of support and induction that beginning principals need. See all elements for effective principal preparation programs in Exhibit 38.

Exhibit 38. Elements of effective principal preparation programs

Elements	Features
Alignment with NELP standards from the National Policy Board for Educational Administration	Eight standards are addressed: <ol style="list-style-type: none"> 1. Mission and Vision 2. Ethics and Professional Norms 3. Equity, Inclusiveness, and Cultural Responsiveness 4. Learning and Instruction 5. Community and External Leadership 6. Operations and Management 7. Building Professional Capacity 8. Internship
Strong, formal partnerships between the principal preparation program and school districts that recruit program graduates	Partnerships address: <ul style="list-style-type: none"> • Alignment of the program with district needs • Provision of clinical experiences • Engagement of experienced school administrators to teach courses, serve as mentors, and collaborate on program design, evaluation, and improvement
Rigorous admissions criteria for preparation programs	Programs use interviews, recommendations, and performance data such as teaching evaluations in order to select candidates who have strong motivation and potential to become effective principals in challenging school contexts.
Leadership coursework combined with extensive practical experience	Coursework about school leadership is coordinated with extensive practical experience in schools to enable aspiring principals to apply their knowledge in real-world contexts and obtain feedback from experienced administrators and teachers.
Programs that use cohort models	Preparation programs group aspiring principals into cohorts who progress through the program together and learn from each other.

Elements	Features
A focus on the role of the principal as an instructional leader	Coursework, projects, and practical experiences focus on what principals do to support effective teaching and learning.
Faculty members who are or have been successful school leaders involved in designing the program and teaching courses	Faculty are grounded in the day-to-day realities of school leadership and can offer practical solutions and guidance.
Extensive clinical experience prior to entering the principalship	Ideally, candidates have a full-year paid internship that includes mentoring from experienced principals to provide candidates with authentic opportunities to engage in leadership work and connect theory to practice. NELP Standard 8 calls for a minimum of six months of concentrated internship or clinical experience.
Mentors or coaches for new principals	Mentors are compensated for their time and commit to serve as coaches, share their experiences, and guide aspiring principals in reflecting on their performance and approach as a principal.
Preparation of principal candidates for current and future school environments	Preparation programs provide coursework and experiences to help candidates gain expertise in the choice of high-quality instructional practices, in culturally responsive teaching, in personalized and competency-based learning approaches, in social-emotional development and needs, in the roles of specialized instructional support personnel, in technology-enhanced teaching and learning, in restorative practices, in engagement with the community, in school improvement processes, in the effective use of data, and in many other areas.
Authentic, competency-based assessment	Preparation programs assess program participants' progress and readiness for licensure as a school administrator based on clearly defined and measurable competencies.

Source: Wallace Foundation (2016)

Studies have found that access to high-quality preparation programs, principal internships, and mentors significantly reduces the likelihood that principals will leave their schools (Tekleselassie & Villarreal, 2011). Research also suggests that districts that invest in building their principal pipeline see significant gains, yet few districts have pulled together a coherent set of strategies to form a pipeline to the principalship (Turnbull, Anderson, Riley, MacFarlane, & Aladjem, 2016). North Carolina has a large pool of assistant principals that provide the potential for building the pipeline.

The Wallace Foundation posited that public school districts in the United States could improve school leadership through systematic improvements to a core set of activities related to the preparation, hiring, support, and management of school leaders. The foundation launched the Principal Pipeline Initiative in 2011 in six large districts, including Charlotte-Mecklenburg Schools, to test that hypothesis. The initiative defined four key components of a principal pipeline: (1) leadership standards that guide all pipeline activities; (2) preservice preparation opportunities for assistant principals and principals (including not only the preservice training itself, but also recruitment and selection into these opportunities); (3) selective hiring and placement; and (4) on-the-job induction, evaluation, and support. The research from this initiative has demonstrated that (1) principal pipelines are feasible — all

six urban districts were able to implement comprehensive pipelines in ways that made sense for their context; (2) principal pipelines are effective — schools in pipeline districts with new principals outperformed comparison schools in math and reading; and (3) principal pipelines are affordable — on average, districts spent \$42 per student each year to operate and enhance their principal pipelines (Kaufman, Gates, Harvey, Wang, & Barrett, 2016; Gates, Baird, Master, & Chavez-Herrerias, 2019). The research supports investments in principal pipelines to improve the quality of school leaders and reduce unwanted principal turnover.

❖ **Finding #2: North Carolina principals are prepared through multiple pathways, which have different outcomes on the supply and retention of principals.**

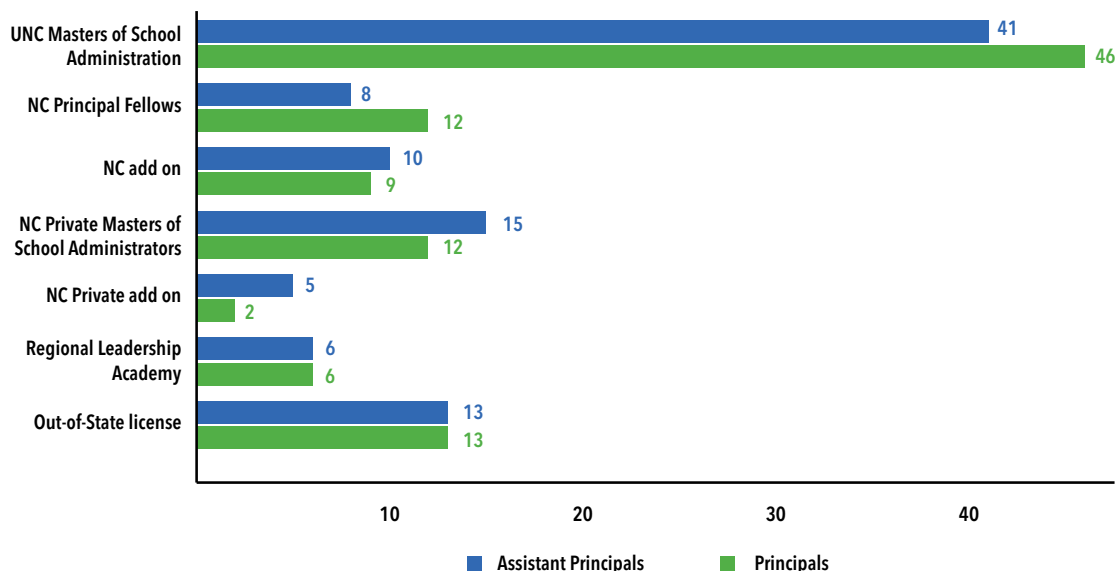
Bastian and Goff (2017) identified seven different preparation pathways through which North Carolina principals had been prepared to obtain their school administrator licenses. These included programs in which participants earned a master's degree in school administration (MSA) and programs that offered "add-on" nondegree programs that prepare educators who already had a master's degree for licensure as a school administrator. The seven pathways, as of 2017, were:

- » **UNC Masters of School Administration (UNC MSA)**
- » **North Carolina Principal Fellows (NCPF):** A program that provides scholarship funding to support individuals during a two-year full-time UNC MSA program, in return for a four-year commitment to work in North Carolina schools
- » **UNC add-on:** An add-on (nondegree) principal license from a UNC system institution
- » **North Carolina private MSA (NCP MSA):** An MSA from a private or independent college or university in North Carolina
- » **North Carolina private add-on (NCP add-on):** An add-on (nondegree) principal license from a private or independent college or university in North Carolina
- » **Regional Leadership Academy (RLA) license:** A principal license earned from one of three leadership academies (the Northeast Leadership Academy, the Piedmont-Triad Leadership Academy, or the Sandhills Leadership Academy)
- » **Out-of-state license:** A principal license earned through a program outside North Carolina

Based on a survey conducted during the 2016–17 school year (Bastian & Goff, 2017), Exhibit 39 shows the percentage of the 1,935 responding principals and assistant principals who came through each pathway.²³

23 Since the survey had a 40% return rate and those who responded were similar in a number of measures to those who did not, this should be a good approximation of the percentage of all 4,887 principals and assistant principals at the time of the survey.

Exhibit 39. Percentage of principals and assistant principals prepared through the seven pathways



Source: Bastian & Goff (2017)

Note: At the time of the survey, three leadership academies funded by Race to the Top had been operating for several years. Only one continued after the grant funding, so the percentage for the RLA pathway would be expected to decrease in the following years.

Data show a relationship between pathways to principalship and retention, with UNC MSA graduates, including those who are Principal Fellows, being the most likely to remain in their position in a North Carolina public school compared with those who entered through other pathways.

In recent years, there has been a decrease in MSA graduates, from 512 in 2008–09 to 238 in 2016–17. A particularly steep drop occurred following the 2013–14 school year. In prior years, many who obtained MSA degrees were not planning to become school administrators, but were obtaining the degree because it led to an increase in teaching salary. That benefit was eliminated in 2013 and likely accounts for the sharp drop in MSA program enrollments since the 2013–14 school year.

✦ Finding #3: North Carolina has made significant progress in building innovative and effective principal preparation programs that incorporate recommended best practices.

Efforts to improve principal preparation took a major step in 2007 when legislation was enacted that required the North Carolina State Board of Education (NCSBE) to set higher certification standards for aspiring school administrators. Universities were required to redesign their MSA programs to comply with the new standards and present their redesigned programs to the NCSBE in order to obtain reaccreditation. In 2008, the NCSBE created the North Carolina School Executive Evaluation Rubric for Preservice Candidates. Aspiring administrators are

now required to demonstrate mastery based on the rubric prior to receiving their administrator license. All UNC system MSA programs underwent major changes to comply with the requirements of the NCSBE.

Between 2009 and 2011, four new principal preparation programs became available. New Leaders for New Schools, a national organization, began certifying school leaders in the Charlotte-Mecklenburg district through its one-year intensive full-time program. The Northeast Leadership Academy at North Carolina State University opened in 2010, and two other regional academies, Sandhills and Piedmont-Triad, opened in 2011, with all three of these leadership academies supported through Race to the Top grant funding. These regional academies were specifically designed to recruit and prepare individuals to become effective turnaround leaders who are able to lead the improvement of low-performing and high-poverty schools. All of these programs, though different in design, provided alternatives to the existing public and private MSA programs and incorporated many of the recommended elements of effective programs.

Only the Northeast Leadership Academy is still in operation, and now, renamed the North Carolina Education Leadership Academy (NELA), it serves multiple cohorts and awards MSA degrees at North Carolina State University. The other two regional academies were not able to secure funding after the Race to the Top grant ended, and the New Leaders for New Schools contract was not renewed. Although only one of the four programs continues today, much was learned that has continued to inform principal preparation programs in the state (Brown, 2014).

The NELA seeks to increase student achievement by preparing principals to provide school improvement leadership in high-poverty, hard-to-staff, and historically low-performing schools. Participants receive a scholarship and a salary during their residency in return for their commitment to work in North Carolina schools for at least four years. The NELA has received recognition as an innovative and effective model both within North Carolina and nationally, and it provides North Carolina with an exemplary model of effective principal preparation, one that has influenced other programs in the state.

In 2015, influenced by the success of the NELA model and the need to prepare additional principals for high-need schools, the state legislature initiated the Transforming Principal Preparation Program, a competitive state-funded grant program to support additional innovative and effective principal preparation programs. Designed to allow for multiple models and customized learning experiences, TP3-funded programs must incorporate the elements of high-quality principal preparation programs, including intentional recruitment efforts, a high bar for admissions, rigorous and relevant coursework, a full-time paid residency, executive coaching, and a focus on authentic partnership with and preparation for service in high-need schools and districts. By investing state funds to subsidize candidates' tuition and residency, North Carolina is enabling institutions to be highly selective with new candidates and to provide the candidates with the deep, practice-based preparation that research suggests they need (BEST NC, 2018). The state currently makes a \$4.5 million annual investment in six TP3-funded programs. In the first two years, the six TP3-funded programs enrolled 120 students. Of the 118 program completers, 81% completed school administrator licensure requirements and 61% of those immediately secured positions as assistant principals in North Carolina schools (Sturtz McMillen, Carruthers, Lovin, & Hasse, 2018). In addition, 100% of district representatives who were surveyed about the TP3 agreed or strongly agreed with the statement that they were very satisfied with the overall quality of the program (Sturtz McMillen, Carruthers, Lovin, & Hasse, 2018).

❖ Finding #4: The North Carolina Principal Fellows scholarship program successfully attracts strong candidates to principal preparation programs.

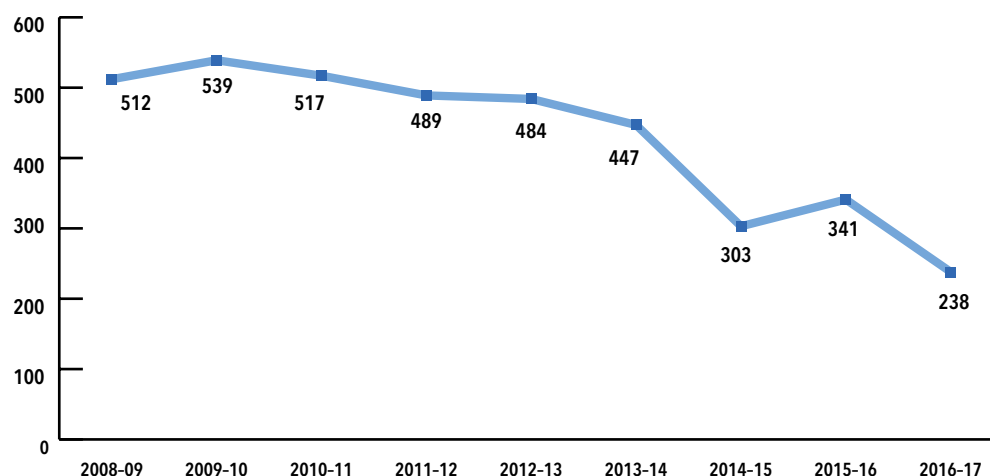
The state's Principal Fellows program was launched in 1993 to attract outstanding aspiring principals. The program provides competitive, merit-based scholarship loans to individuals seeking an MSA degree to prepare for a school administrator position in North Carolina public schools. Principal Fellows can attend any of 11 MSA programs, all within the UNC system. In their first year, Principal Fellows receive \$30,000 to assist them with tuition, books, and living expenses while they study full time. In their second year, Principal Fellows receive an amount equal to the salary of a first-year assistant principal as well as an education stipend while they undertake a full-time internship in a school where they work under the supervision of a veteran principal. Fellows' yearlong internships provide meaningful and authentic learning opportunities that research indicates are critical in principal development (Sutcher, Podolsky, & Espinoza, 2017). After completing their preparation program, Principal Fellows are required to maintain employment in a school or district leadership role in North Carolina for four years to repay their scholarship loan. Currently, the state invests \$3.2 million a year in the North Carolina Principal Fellows program (North Carolina Office of State Budget and Management, 2019).

As of 2015, about 1,300 Principal Fellows had completed the program, a 90% graduation rate. Within three years after receiving their MSA, 78% of Principal Fellows have assumed an administrative position, as compared with 49% of UNC system MSA program graduates overall. In addition, three years after program completion, only 14% of Principal Fellows had left North Carolina public schools, as compared with 24% of UNC MSA graduates overall. Longer-term data show that Principal Fellows are more likely to become assistant principals and principals and have better retention rates than their peers who were not Principal Fellows (Bastian & Fuller, 2015). Research on the effectiveness of school leaders found that Principal Fellows have more positive impacts on student absenteeism, teacher retention, and school working conditions than other UNC MSA graduates and all other North Carolina principals (Bastian & Fuller, 2015).

❖ Finding #5: Although there are high-quality preparation programs in the state, they are training fewer and fewer principals.

Traditionally, the UNC system has been the primary source of principals for North Carolina public schools. However, this source of principals declined by about 60% between 2009 and 2016. (See Exhibit 40.)

Exhibit 40. UNC system–prepared principals, 2008–2016



Source: North Carolina Department of Public Instruction; University of North Carolina System Office; Educational Policy Initiative at Carolina, University of North Carolina

The decline in the numbers of individuals credentialed to become school leaders has been distributed across all 13 education schools in the UNC system. Consequently, there are schools — especially those that serve high-need populations of students — that have difficulty recruiting well-prepared candidates and, often, difficulty keeping them.

National research and the data we collected in North Carolina indicate that there are three major factors influencing principal supply and turnover:

- » Level of preparation and mentoring: Better-prepared principals are more likely to stay in their positions.
- » Compensation: Principals are more likely to stay in communities where they are adequately and reliably compensated.
- » Working conditions: Principals are more likely to stay in schools where they are well-supported to do their work.

❖ **Finding #6: Schools leaders need ongoing professional learning opportunities, and North Carolina has well-designed programs for current principals and assistant principals that need to be scaled up.**

For principals to become more effective and grow in their profession, they need ongoing professional learning opportunities. Even the most effective administrator preparation programs cannot prepare principals with all the necessary knowledge typically obtained over time at different schools throughout their careers (Matlach, 2015). Ensuring that principals have access to job-embedded, ongoing, and customized professional development and coaching can increase their competence and improve retention (Goldring & Taie, 2014).

A survey administered for this study asked practicing North Carolina principals to identify areas in which they would like to receive more professional development related to shaping teaching and learning conditions. The most commonly indicated areas included (1) developing systems that meet children’s needs and support their development in terms of physical and mental health (chosen by 58% of respondents); (2) leading schools that support students’ social and emotional development (chosen by 52% of respondents); and (3) creating a school environment that develops personally and socially responsible young people and uses restorative practices (chosen by 51% of respondents).

The North Carolina Principal and Assistant Principal Association is the major provider in the state of professional development opportunities for school leaders. Its program for principals, Distinguished Leadership in Practice (DLP), has been offered since 2011. From 2011–12 through 2014–15, when the program had funding from the Race to the Top grant, 634 principals participated, about 25% of those in the state. Of North Carolina’s 115 traditional school districts, 98 have sent at least one principal to the DLP program. Participants have access to advisers who are proven effective principals and DLP alumni. Survey responses from direct supervisors of participating principals indicate their satisfaction with the DLP program; they also describe positive changes in participants’ practices. The program was very highly regarded by the participants, and surveys of staff at participants’ schools indicated that DLP principals implemented new knowledge and skills that increased their instructional leadership and relationship development (Weiss et al., 2014).

An additional program for principals, Leadership in Personalized and Digital Learning, is offered by a partnership of the Friday Institute at North Carolina State University and the NCPAPA. Designed to prepare principals to plan and implement personalized learning in their schools, the program includes a five-session course with online and face-to-face components that enable principals to experience personalized and digital learning. The NCPAPA also provides Future Ready Leadership, a cohort-based program that offers six daylong sessions to help assistant principals prepare to assume the role of principal (Williams, 2018).

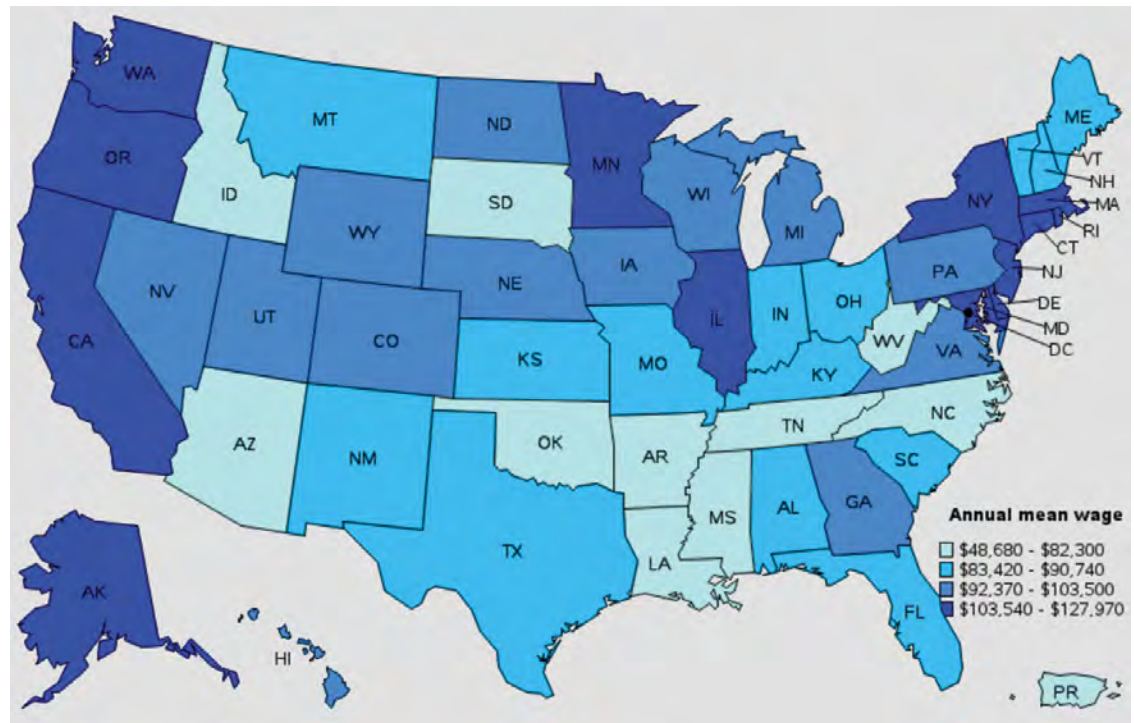
Participation in each of these programs requires an application and a recommendation from the district superintendent. Demand has exceeded the number of openings available in each program. Superintendents who participated in focus groups reported that the NCPAPA programs are well designed and valuable for their principals and assistant principals. In contrast, they reported that NCDPI professional development offerings for school leaders focus only on administrative and compliance requirements and do not support leadership development. Superintendents also reported that they would like to provide additional local professional development, but rigid state statutes prescribing the school calendar and limited funding hamper their ability to do so. Overall, according to interviewees and focus group participants, other than the NCPAPA programs listed above and what districts can provide, there is insufficient professional development available for school leaders.

Mentoring and induction programs for novice principals are another effective tool for developing and retaining leaders. Although some districts provide induction for all novice principals and North Carolina State University’s Educational Leadership Academy supports its graduates for years after graduation, these are not consistent statewide practices, and state funding to support leadership mentoring is not available. Interviewees and focus group participants noted that during the Race to the Top grant, the NCDPI provided coaches to support principals in the turnaround of low-performing schools, but this type of valuable support is no longer available.

- ❖ **Finding #7:** The current compensation system creates disincentives for principals to remain in the principalship and creates disincentives for effective principals to work in underperforming schools that often take more than one year to improve.

In 2017, the average principal salary in North Carolina was \$64,416, whereas the national average for principals was \$95,310 (BEST NC, 2018; U.S. Bureau of Labor Statistics, 2018). North Carolina falls in the lowest quartile of the 50 states for average salary range for elementary and secondary school administrators, as shown in Exhibit 41. In the Southeast, Virginia, South Carolina, Georgia, and Kentucky provide higher annual wages for school administrators.

Exhibit 41. Annual mean wage of education administrators, elementary and secondary school by state, May 2018



Source: U.S. Department of Labor, Bureau of Labor Statistics (2018)

The North Carolina legislature made significant changes to school administrator salary schedules that went into effect on July 1, 2017. The principal compensation policy is based on school size, growth, and average daily membership. The changes made to the compensation system in 2017 were intended to raise compensation for principals and reward those whose schools meet and exceed growth targets; these changes provided an average raise of about 9% overall. However, a consequence of the new policy is that principals' salaries now vary on the basis of their school's size and performance from year to year. The compensation system creates a disincentive for effective principals to work in underperforming schools, which often take more than one year to improve and meet or exceed targets for growth.

Compensation and benefits can be used to attract and retain effective principals in hard-to-staff and low-performing schools, yet there are no current bonuses or incentives for principals to lead these schools. Principals are also no longer eligible for advanced and doctoral degree salary supplements. In addition, principals (and other educators) hired after January 21, 2021, will not receive health benefits in retirement. These changes in policy make leading a small and low-performing school less attractive to aspiring principals.

Results from the survey of North Carolina principals conducted for this study indicated that 24% of responding principals identified compensation as the major factor that would cause them to leave their principal roles in the next three years and approximately 28% (n=720) of responding principals “strongly agreed” or “somewhat agreed” with the statement “If I could get a higher-paying job, I’d leave education as soon as possible.” In addition, 24% (n=690) of responding principals reported that as a result of the new principal compensation policy (which eliminates consideration of a principal’s experience in favor of pay based on school performance), they would “seek to retire as soon as possible,” “leave to obtain principalship in another school,” or “leave the principalship.” When asked about North Carolina’s compensation policy, 44% (n=490) of responding principals reported that they “oppose” or “strongly oppose” the policy.

Exhibit 42 below compares base salaries of teachers with a bachelor’s degree, teachers with a master’s degree and certification from the National Board for Professional Teaching Standards (NBPTS), and assistant principals with a master’s degree. Based on the teacher salary schedule, some school administrators choose to stay on the teacher salary schedule. For example, principals interviewed for the study pointed out that teachers with a master’s degree and NBPTS certification earn more than assistant principals with a master’s degree. Given the additional responsibilities required of assistant principals, it will be difficult to attract higher-paid teachers into demanding administrator positions when they may earn less in the new role.

Exhibit 42. Annual salaries of teachers and assistant principals, 2018–19

Years of experience	Teacher (bachelor’s degree)	Teacher (master’s degree + National Board certification)	Assistant principal (master’s degree)
0	\$35,000	N/A	\$41,650
2	\$37,000	N/A	\$44,030
4	\$39,000	N/A	\$46,410
6	\$41,000	\$50,020	\$48,790
8	\$43,000	\$52,460	\$51,170
10	\$45,000	\$54,900	\$53,550
12	\$47,000	\$57,340	\$55,930
14	\$49,000	\$59,780	\$58,310
16	\$50,000	\$61,000	\$59,500
18	\$50,000	\$61,000	\$59,500

Years of experience	Teacher (bachelor's degree)	Teacher (master's degree + National Board certification)	Assistant principal (master's degree)
20	\$50,000	\$61,000	\$59,500
22	\$50,000	\$61,000	\$59,500
24	\$50,000	\$61,000	\$59,500

Source: North Carolina Department of Public Instruction (2018)

✦ Finding #8: Working conditions influence principal retention.

Other working conditions experienced by principals in their schools and districts also influence whether they will take a principal position and decide to stay (Tekleselassie & Villarreal, 2011; Burkhauser, Gates, Hamilton, & Ikemoto, 2012; Loeb, Kalogrides, & Horng, 2010; Béteille, Kalogrides, & Loeb, 2012). These conditions include workload, job complexity, and disciplinary environment, as well as the availability of school resources, such as money and staff, and relationships with students, families, teachers, and district administrators. Some research has also found that principals' job decisions are related to the amount of support they receive from the district and the autonomy they have for making personnel and resource allocation decisions. Compensation and working conditions are all important for recruiting, developing, and retaining principals (Fuller, Young, Richardson, Pendola, & Winn, 2018; Farley-Ripple, Raffel, & Welch, 2012).

Our research and that of others also demonstrates that principals who understand how to create conditions for distributed leadership in their schools and who value and know how to involve teachers in shared decision-making also have a strong, positive impact on school effectiveness and teacher retention. Other research conducted as part of this project demonstrates that North Carolina has a relatively inexperienced principal workforce, especially in high-poverty schools, as well as a principal workforce that does not feel well prepared to recruit and retain teachers or to lead school change efforts (Berry, Bastian, Darling-Hammond & Kini, 2019). Ensuring principals have favorable working conditions, including the professional development, coaching, and support they need to grow and the staff resources they need, such as instructional coaches to support the teachers, is essential.

Recommendations

Based on the findings described above, four overall areas for action are recommended to ensure access to effective school principals for all schools.

✦ 1. Update the state's principal preparation and principal licensure requirements.

- » Update the state's school administrator preparation standards so that they align with the National Education Leadership Preparation standards from the National Policy Board for Educational Administration.

- Require principal preparation programs to demonstrate that they are preparing their students to meet these standards.
- » Require principal preparation programs to develop candidates' capacity for effective instructional leadership, including leading education that is standards-based, personalized, culturally responsive, and attentive to children's social, emotional, and academic development. Require the programs to also develop principals' capacity to support developmental transitions across school levels, from Pre-K through high school, and to engage families and the community.

2. Continue to expand access to high-quality principal preparation programs.

The combination of the Transforming Principal Preparation Program and the long-established Principal Fellows scholarship program provides North Carolina with an effective approach to having a strong pipeline of qualified and well-prepared principals. Both should be expanded to ensure a sufficient number of new principals; the NCPAPA estimates that the state needs approximately 300 new principals each year.²⁴

- » Expand the number of fellowships available through the Principal Fellows program as needed to attract a sufficient number of aspiring principals to meet the future needs of the state.
 - Actively recruit diverse candidates to apply to be Principal Fellows.
- » Continue to expand the TP3 while maintaining high standards for participating programs and the paid internship requirement. In doing so:
 - Maintain and expand the TP3's focus on preparing principals who are able to serve as transformation leaders of low-performing, high-poverty schools in both rural and urban communities.
 - Provide support for the improvement of other existing principal preparation programs to meet the TP3's standards.
 - Set the goal of having each school district partner with at least one of the TP3-funded programs.
 - Actively recruit minority candidates to the TP3-funded programs and seek to establish TP3-funded programs in minority-serving universities in order to address the need to diversify the school leadership workforce.

3. Expand the professional learning opportunities for current principals and assistant principals.

Programs currently offered by the NCPAPA, such as Distinguished Leadership in Practice and Future Ready Leaders, should serve as models to be expanded, scaled, and/or replicated throughout the state.

²⁴ Confirmed in correspondence with NCPAPA Executive Director Shirley Prince.

- » Provide a grant program, similar in some ways to the TP3, to support the development or expansion of professional learning opportunities for current principals and assistant principals. These programs should incorporate the elements of effective school leader preparation, as described in the findings.
- » Create a formal statewide mentorship program for beginning assistant principals and principals. The program should provide opportunities for veteran principals on sabbatical or recently retired principals to coach beginning school administrators.
- » Apply at least some of the optional 3% set-aside allowed under ESSA Title II to provide professional development to school and district leaders, as is being done in other states, such as Maryland and Massachusetts (Espinoza & Cardichon, 2017).

4. Revise the principal and assistant principal salary structures and improve working conditions to make these positions more attractive to qualified educators, especially those in high-need schools.

The current compensation system for school leaders works against the state’s meeting the *Leandro* requirement of a qualified principal in every school. We recommend revising the principal salary structure so that it ensures an adequate level of compensation competitive with other jobs requiring similar skills and training, provides a more dependable set of expectations for compensation, and creates incentives, rather than disincentives, for working in high-need schools. We also suggest that the state consider whether other compensation incentives are needed to offset disincentives that may have been created by elimination of retiree health benefits and pension benefits for leaders hired after 2021.

This system needs substantial revision, including the following actions:

- » Ensure the salaries for assistant principals and principals are, in all cases, higher than the same individual would receive as a teacher.
- » Provide incentives for school leaders to work in high-need schools, including:
 - A meaningful supplement for principals who take a position to turn around a persistently failing school
 - Protection against principals having a salary reduction if they go to work in low-performing, hard-to-staff school in order to enable multiyear efforts to improve these schools
- » Reward school leaders for their school’s progress on broader indicators beyond student achievement on standardized assessments, as recommended in this report in the Accountability Recommendations section, including indicators related to teacher recruitment and retention, school working conditions, opportunities to learn, and student achievement growth.
- » Improve working conditions for school leaders by taking the following actions:

- Provide principals with more autonomy to allocate resources, including funding and personnel assignment to address a school’s needs.
 - Scale up the use of staffing models, such as Advanced Staffing and Opportunity Culture, to distribute instructional leadership in schools serving economically disadvantaged students (these models reduce the workload on principals and build teachers as instructional leaders to support their peers).
 - Increase the number of nurses, counselors, social workers, and psychologists available in schools so the principal has access to professionals who are trained to address students’ physical and mental health and out-of-school issues that impede students’ learning.
 - Develop superintendents’ and other district leaders’ capacity to create a strong professional culture and collaborative learning environments across the district and school boards.
- » Partner with the NCPAPA and the North Carolina School Superintendents’ Association to help strengthen district leadership that builds strong working conditions for principals and other staff.
 - » Use licensing and accreditation levers, plus improvement grants to programs and professional development funding, to leverage strong principal learning for standards-based, culturally responsive, trauma-informed leadership that can attend to social, emotional, and academic development that can support success in high-poverty schools. Professional development and training for principals should be available to help principals adopt school models, such as a community schools model, that are successful with high-need children.²⁵
 - » Ensure, through preparation and professional development, that principals are prepared to create collaborative learning environments for teachers, which can enhance effectiveness and stem turnover in the teaching force.
 - » Create mentoring, induction, and coaching opportunities for the existing principal workforce, as some states have done. In Delaware, for example, the state leadership academy, which operates out of the University of Delaware, provides mentoring for beginning principals and coaching for veterans. In Georgia, the Georgia Leadership Institute provides these supports.

²⁵ Community schools are public schools that partner with families and community organizations to provide well-rounded educational opportunities and supports for students’ success.

Early Childhood Education²⁶



Critical Need: Provide all at-risk students with the opportunity to attend high-quality early childhood programs. These programs should develop all students' personal, social, cognitive, and language skills in order to prepare her or him to begin kindergarten fully ready to learn.

The critical importance of addressing the needs of prospective enrollees in North Carolina's public education system has been established by the *Leandro* case and was upheld by the Court in 2004, as part of the requirement that North Carolina guarantee all children a sound basic education. Research indicates that a high-quality early foundation for learning is critical for later success in school and beyond and can significantly improve life outcomes for children from low-income families (Heckman, Pinto, & Savelyev, 2013; Heckman & Karapakula, 2019). However, access to early childhood education remains out of reach for many low-income families in North Carolina.

Research Topics and Approach

The research team examined access to early childhood education in North Carolina through a review of existing research and new analyses of quantitative and qualitative data collected for this report. In addition, the team gathered substantial stakeholder input from participants in the North Carolina Early Childhood Action Plan and Pathways to Grade-Level Reading groups and conducted extensive analysis of information produced by these two groups. The team examined the following topics:

- » The status of early childhood programs in North Carolina
- » Access to high-quality early childhood programs for economically disadvantaged young children
- » Barriers that prevent economically disadvantaged children from having access to high-quality programs
- » Existing capacities and opportunities that could be built on to ensure economically disadvantaged children have access to and participate in high-quality early childhood programs

Findings

❖ Finding #1: High-quality early childhood education is available in North Carolina.

Two statewide early childhood education programs, NC Pre-K and Smart Start, provide high-quality programs that have been shown to have a strong positive impact on participating children's readiness for and future success in school.

²⁶ These findings and recommendations are primarily drawn from a brief produced as part of this series: *High-Quality Early Childhood Education in North Carolina: A Fundamental Step to Ensure a Sound Basic Education* (Agnew, Brooks, Browning, & Westervelt, 2019), available in Appendix E.

NC Pre-K. NC Pre-K is the state’s pre-kindergarten program (previously known as More at Four) that serves 4-year-olds, primarily from low-income families. This state-supported part-day program current enrolls just over 29,500 children during the traditional school year in a mixed-delivery system of public schools, private centers, and Heart Start centers (Barnett, 2019). To qualify, a child must either be (a) from a family whose gross income is at or below 75% of the state median income or (b) in an active duty or certain other military family. Up to 20% of children enrolled may have higher family incomes if they have documented risk factors in specific categories, including developmental disability, limited English proficiency, educational need, or chronic health condition.

The NC Pre-K program has consistently had high standards, a strong record of quality, and extensive evidence of effectiveness. Rigorous research has demonstrated that the NC Pre-K program has produced both short- and long-term benefits through grade 8. For example, multiple years of evaluation results from the Frank Porter Graham Child Development Institute at the University of North Carolina–Chapel Hill showed that NC Pre-K student gains exceeded expected developmental benchmarks in language and literacy, math, general knowledge, and behavior skills, especially for dual language learners and low-income students (Wechsler et al., 2016). Researchers at Duke University found that not only does NC Pre-K raise children’s math and reading test scores, it also reduces their rates of special education placement and grade repetition through elementary school. Further, these positive effects were shown to have either held steady or significantly increased through at least fifth grade (Barnett, 2019).

Smart Start. The other major program, Smart Start, was established in 1993 as a public-private partnership, which expanded to all 100 counties in the state by 1997. Smart Start is a network of 75 nonprofit agencies that offer a “one-stop shop” of coordination for early education services for families with children from birth to age 5 — including parenting classes, child care program consulting, and case management or referral services for families — as well as ensuring early childhood programs are high-quality, child-focused, and family-friendly. Smart Start focuses on connecting families with resources in their communities in order to provide children with high-quality, healthy environments. As of 2017–18, the program supports 1,974 centers serving approximately 79,292 children and their families (Smart Start, 2018).

In North Carolina, Smart Start was designed to meet 25% of the defined need for children aged 0–5. The formula to calculate need is updated on an annual basis and takes into account state and federal data on child population, poverty levels, and cost of care and funding data from existing state and federal sources. In 2018–19, Smart Start local partnerships spent \$147 million to meet approximately 5% of the defined need in early childhood learning (North Carolina Partnership for Children, 2019). Smart Start is a significant funding source for NC Pre-K, which is currently serving about 72,000 children. Income-eligible families receive a child care subsidy, an average payment of about \$6,200 a year. There are about 28,000 children in the state currently on waiting lists for child care.

Despite budget reductions to Smart Start funding each year following the Great Recession of 2008, the program has maintained positive outcomes. Research studies have found that children who participated in Smart Start-supported programs entered elementary school with better math and language skills, as well as fewer with behavioral problems compared with their peers (Ponder, 2010). Both Smart Start and NC Pre-K programs have been found to significantly reduce the likelihood of special education placement in third grade (Muschkin, Ladd, & Dodge, 2015).

❖ Finding #2: Participation in high-quality early childhood education varies in North Carolina, and lower-wealth communities often lack an adequate supply of early childhood programs.

Unfortunately, there is a shortage of available Pre-K slots across North Carolina, and only about half of eligible children are served (Barnett, 2019). Families pay approximately two thirds of all early childhood costs, and more than 50,000 children are on waiting lists for subsidies.

Access to the high-quality early childhood education programs in the state varies dramatically, with lower-wealth counties lacking an adequate supply of high-quality early childhood programs. Based on estimates of the total number of children eligible for NC Pre-K, the unmet need is almost 33,000 children per year across North Carolina (Barnett, 2019).

Approximately 25 out of North Carolina's 100 counties are reaching the target participation rate of 75% or more of eligible children in their county.²⁷ The limited participation is most severe for children from low-income families and for students of color. This pattern in lack of participation holds in both urban and rural areas; however, rural counties have the most inconsistency regarding percentage of eligible children served by NC Pre-K compared with urban or suburban counties.

❖ Finding #3: Costs and other challenges for communities and families create barriers to accessing early childhood education.

Funding needs. There are funding barriers to the expansion of high-quality early childhood education that need to be addressed. In 2011, the state legislature imposed a 20% budget cut on Smart Start, bringing the annual funding levels to less than \$150 million, which is the lowest amount of funding for the program since the 1998 fiscal year. Although North Carolina's economy has been steadily improving since the Great Recession, adequate Smart Start funding has not been restored (Wechsler et al., 2016).

NC Pre-K is funded by the state at approximately \$154 million each year. However, the state funding is not intended to fully cover the cost of the NC Pre-K program — it covers about 60% of the cost, leaving individual counties to cover the remaining 40% (Barnett, 2019). The state's current NC Pre-K contribution is \$5,200 per child. The North Carolina Pre-Kindergarten Cost Study conducted by North Carolina State University found the average cost per child for those already in the program is approximately \$9,100. Other resources, including county funding, Smart Start funding, federal Title I dollars, in-kind resources, and existing administration and infrastructure of larger organizations, are leveraged by programs to make up the difference (Barnett, 2019). However, fully funding NC Pre-K will not on its own enable access to high-quality early learning for every young child who needs it.

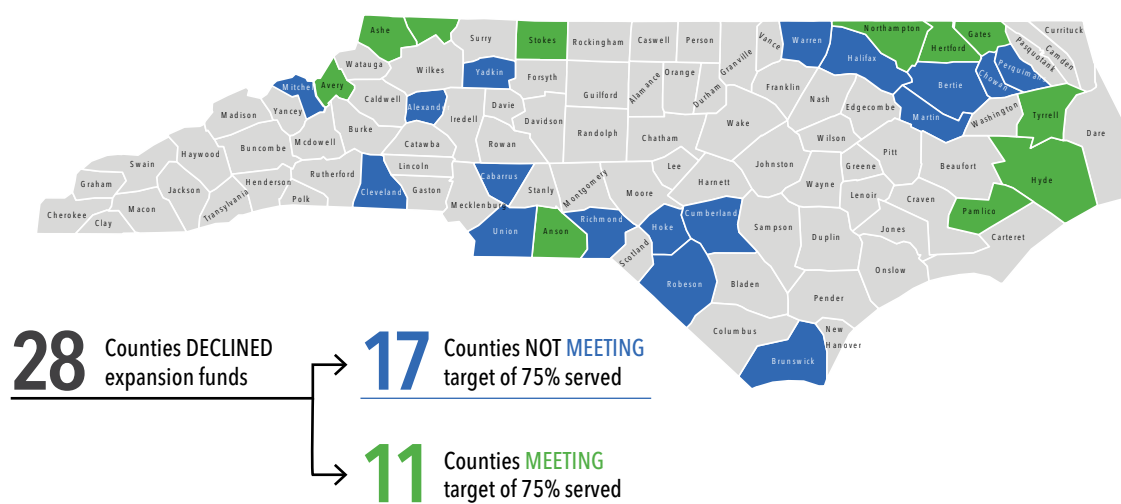
Other barriers. Lower-resourced counties need greater support to expand early childhood services, beyond just funding. Despite state attempts to expand financial support for NC Pre-K in the 2017–2019 budget, 44 out of 100 counties declined the NC Pre-K expansion funding. Specifically, 17 counties declined expansion funds in

27 The state has no data below the county level about supply of, access to, or unmet need for early childhood education.

both 2017 and 2018 that are also not meeting the target of 75% of eligible children enrolled in the county (see Exhibit 43 below). These 17 counties are more economically distressed — as measured by both the state Tier Ranking System and by child poverty, food insecurity, and unemployment rates — than other counties in the state. Reasons for declining expansion funding include that many low-income communities lack:

- » The necessary number of qualified teachers to fill teaching slots
- » Enough eligible/high-quality private programs to meet the need
- » The ability to meet the local funding match requirement
- » Transportation that enables families and program staff to get to centers

Exhibit 43. Counties that declined expansion funds and that are not meeting target of 75% served, 2017–18 and 2018–19



Source: Barnett (2019)

❖ Finding #4: Lack of ability to supply the necessary numbers of qualified teachers is an additional barrier to expansion and increased access to early childhood education.

The volume and quality of the early childhood educator pipeline needs to be increased. As of 2015, 64% of lead child care teachers in North Carolina did not have an associate's or bachelor's degree in early childhood education. In fact, 38% of lead child care teachers did not have an associate's or bachelor's degree at all.

Most early childhood education services in North Carolina have limited education requirements for teachers. However, NC Pre-K has been shown to have the most stringent policies related to teacher qualification. Lead teachers in NC Pre-K are required to have at least a bachelor's degree and either hold or be working toward licensure in early childhood. This licensure can take the form of either a North Carolina Birth Through Kindergarten Standard Professional II licensure or — for teachers with a K–6 license — a Preschool Add-on License. Teaching

assistants must have a high school diploma or GED and must have or be working toward either an associate's degree in early childhood education or child development or a child development associate credential.

Turnover in the early childhood workforce is quite high. The average base pay for teachers in public schools is approximately \$35,000, whereas for early childhood education teachers, the median pay is about \$22,800. Further, early childhood education teachers typically do not receive benefits. As is the case nationally, North Carolina taxpayer dollars subsidize the low wages of early childhood education employees through other public programs. Thirty-nine percent of both early childhood teachers and assistant teachers reported that they had received some sort of public assistance (e.g., Medicaid, the Supplemental Nutritional Assistance Program [SNAP], Temporary Assistance for Needy Families, and child care subsidies) in the previous three years.

❖ Finding #5: The transition from early childhood education environments to K–12 environments is challenging for children and families.

Interviews with elementary school leaders conducted by the overall study team underscored that the transition from Pre-K environments into the K–12 system poses additional challenges for North Carolina's youngest residents. Very few elementary school principals have training in early childhood development. Elementary school environments are often not equipped to support the developmental transition of young children into K–12 environments, including through appropriate and proportional staffing of school support staff such as nurses, social workers, and counselors. Better alignment is needed between the early childhood programs and the schools that children from these programs will attend.

Recommendations

In order to strengthen access to high-quality early childhood education, North Carolina must first prioritize children from high-poverty families and communities. These children have the least access to high-quality early childhood education, preventing them from being as well prepared for K–12 schooling as their peers. As research indicates, without high-quality early learning, these children from high-poverty families and communities will begin school at a deficit that is very difficult to overcome. The identification of high-priority communities should be determined through census tract data, rather than at the county level, since some of the highest-poverty communities are in large, diverse counties and would not be targeted if counties are the unit used to determine level of poverty.

🌟 1. Increase the volume and quality of the early childhood educator pipeline.

Increasing access to high-quality early childhood education will not be possible without bolstering the supply of well-qualified talent to provide services. The following actions are necessary to be able to provide the necessary workforce:

- » Link compensation packages (salary and benefits) to public school schedules and align to comparable professions.

- » Determine the number of teachers and other staff needed to meet projected, five-year workforce targets for high-quality early childhood education services for all eligible 4-year-olds.
- » Expand the WAGE\$ Salary Supplement Program to support salary schedule growth.
- » Expand the Infant Toddler Educator AWARDS Program to support salary schedule growth.
- » Provide supplemental funds for NC Pre-K teacher compensation to achieve parity between private centers and public schools.
- » Recruit and prepare new teachers/assistants to fill additional slots, through approaches such as service scholarships, loan forgiveness, residency programs, home-grown programs for paraprofessionals, and teacher career academies for high school students.
- » Adequately fund the child care subsidy system to eliminate all waiting lists.
- » Through coaching, high-quality professional development, and preparation/licensure, bring all teachers/assistants up to standards for high quality.
- » Implement an accessible statewide system of ongoing professional development that inducts new early childhood teachers and supports ongoing learning in critical areas of practice, such as child development, trauma-informed care, social-emotional development, and early literacy.

2. Scale up the Smart Start program to increase quality, access, and support for at-risk children and families.

Communities can use Smart Start funds in the manner that will best meet the needs of the children and families they serve. These funds are a critical way that communities fill gaps in the availability of early childhood services for those who need them.

- » Adjust funding sources that support Smart Start to ensure the most effective use of dollars to better enable communities to meet the local support needs of children and families.
- » Increase Smart Start allocation to account for rising costs and address specific barriers to the expansion of Smart Start programs, including startup costs.
- » Increase the overall investment in Smart Start to meet the defined need of North Carolina children through this program in a manner that phases the investment in over a period of time that allows local partners to make effective use of those resources while progressing toward the benchmark of meeting 25% of student and family need originally outlined in the program.
- » Augment current funding and infrastructure for programs for children aged 0 through 3 (e.g., home visits, child care subsidies, home-based child care, and private child care/Pre-K for eligible 3-year-olds) to build and maintain a robust array of early childhood programs with a high-quality workforce.

• 3. Expand the NC Pre-K program to provide high-quality full-day, full-year services to all at-risk 4-year-old children.

Being able to provide high-quality early childhood education to every at-risk child who needs it will take time. As the state builds its overall system capacity, the most immediate target population for NC Pre-K should be those 4-year-olds in high-poverty communities and low-income families, many of whom currently do not have access to NC Pre-K.

- » Establish a data-collection process to identify children and families in need of early childhood education services in order to accurately inform the state's planning efforts.²⁸
- » Increase the reimbursement rate of funding that can be used to cover provision of higher-quality services and administrative costs incurred by NC Pre-K providers.
- » Increase the reimbursement rate to account for expanded full-day, full-year programming.
- » Implement an annual inflation cost adjustment for the program.
- » Offer financial incentives for four- and five-star private centers that are already providing Pre-K for 4-year-olds in high-poverty communities so they can meet the higher-quality standards to become NC Pre-K sites, thereby allowing them to receive state funding.
- » Build and upgrade facilities to ensure enough high-quality spaces for NC Pre-K sites, either in public schools or venues of community-based programs.
- » Provide additional funds/capacity for transportation for families to get to NC Pre-K sites in both public and private settings (perhaps through joint agreements with public school districts and nonprofit partners).

• 4. Align and improve early-grade K–12 settings to support successful transitions to K–3 and promote early-grade success.

School readiness for North Carolina's youngest residents can be improved by strengthening the connection between early childhood education environments and the elementary learning environment to ensure effective transition into early-grade K–12 settings.

- » Ensure that preschool providers effectively work with families to support transitions from one setting to another and that early-grade K–12 settings have the appropriate knowledge and tools to intake and serve such children and families.
- » Expand effective professional development for principals in early childhood education.

28 A methodology for identifying the most at-risk children is provided in a companion paper that was developed as part of this series: *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities* (Oakes et al., 2019). A brief summarizing this paper is included as Appendix F.

- » Fully fund teaching assistants in the early grades (K–3) to ensure adequate student-to-staff ratios for fostering responsive relationships and effective instruction.
- » Improve student access to specialized personnel support (e.g., nurses, counselors, psychologists) in alignment with nationally recommended ratios and offer competitive salaries to fill positions. Provide school systems with staffing models that support utilizing these specialized staff to meet the social-emotional, behavioral, and physical health needs of young children as they transition into K–3 schooling.
- » Implement formative assessments across systems to guide aligned instructional practices for children from birth through age 8.

High-Poverty Schools²⁹



Critical Need: Direct resources, opportunities, and initiatives to economically disadvantaged students. A strong focus should be placed on addressing the needs of those students in high-poverty schools, to address the greater challenges in those contexts.

More than 400,000 students — over a quarter of the students in North Carolina — attend the 843 high-poverty schools in the state, which represent roughly a third of schools statewide. High-poverty schools are schools in which 75% or more of the students are eligible for federally subsidized free or reduced-cost school meals because of their families' low income,³⁰ making them "at risk," as defined in *Leandro vs. the State of North Carolina* (1997). These high-poverty schools also serve disproportionate numbers of students with other risks identified by the *Leandro* case, including students who have parents with low education levels, who have limited proficiency in English, who are members of a racial or ethnic minority group, or who have families headed by a single parent (*Hoke County Board of Education v. State*, 358 N.C., 2004 [*Leandro II*]). On average, economically disadvantaged students are significantly more at risk of low achievement and academic failure than other students.

Research Topics and Approach

The findings and recommendations in this section are primarily drawn from a study of North Carolina's high-poverty schools. Specifically, the research team conducted an evidence-based assessment of high-poverty schools, focusing on the outcomes of students attending these schools and their access to the *Leandro* tenets. The study compared students' opportunities and results in high-poverty schools with those of students in low-poverty schools — schools with fewer than 25% low-income students — as one indicator of the differences in opportunity available to students attending more- and less-advantaged schools. It also considered the adverse out-of-school conditions that add risk to students in high-poverty schools and whether high-poverty schools provide the supports that the *Leandro* case and prior research document are necessary to provide all at-risk students with an opportunity for a sound basic education.

Based on a review of prior research, the researchers posed the following questions to guide the study:

- » How many high-poverty schools are there? Who attends them? Where are they located?
- » What are the social, racial, geographic, governance, and economic contexts in which high-poverty schools operate?
- » Do high-poverty schools limit students' opportunity for a sound basic education?

29 The findings in this section are largely drawn from the following research report: *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities* (Oakes et al., 2019). A brief summarizing this report can be found in Appendix F.

30 The U.S. Department of Education's National Center for Educational Statistics has established this definition of high-poverty schools.

- » Do high-poverty schools provide equal and adequate access to the *Leandro* tenets?
- » Do high-poverty schools provide supports that help offset the risks associated with concentrated poverty?
- » In what ways do state policies support or constrain high-poverty schools' provision of opportunities and supports?

To answer these questions, the research team drew on existing studies and conducted new analyses of state and federal data and of data from a new survey of principals in North Carolina. The researchers also used data that were collected during on-site observations and during interviews with parents of students and with teachers, administrators, and other staff at high-poverty schools and low-poverty schools in North Carolina.

Findings

The concentration of at-risk and low-achieving students in high-poverty schools requires that these schools receive focused attention as the state seeks to remedy its failure to provide all students with the constitutionally required opportunity for a sound basic education.

❖ Finding #1: North Carolina has large numbers of high-poverty schools and students attending high-poverty schools.

In 2016–17, 807 (33%) of the state's traditional public schools and 36 (21%) of the state's charter schools qualified as high-poverty schools, with 389,204 (26%) of traditional public school students and 15,301 (17%) of charter school students attending these schools. In contrast, only 162 (7%) of traditional public schools in North Carolina were low-poverty schools — defined as having less than 25% of their students being economically disadvantaged — with 10% (147,901) of the state's traditional public school students attending these schools. A much higher percentage of charter schools, 46% (77 schools), qualify as low poverty, with 55% (51,073) of charter school students attending these schools.

High-poverty schools are located in each of the eight education regions of the state and in 78 of its 100 counties. Most high-poverty schools are in high-poverty communities, which results in additional needs of the students and limited supports for those needs and for out-of-school learning opportunities. More high-poverty schools are in rural communities (53%) than in urban centers (32%), suburban communities (6%), and towns (10%).

More than 475,000 children in North Carolina, or 21% of all the state's children, are in families below the federal poverty level (i.e., \$24,600 for a family of four). About one third of those families are at the deep poverty level, with family incomes of less than half of the poverty level. Child poverty rates range from 11% in Orange County to 53% in Northampton County, with poverty most concentrated in counties in the northeast, north central, and Sandhills regions of the state. In 2016–17, approximately 60% of North Carolina's public school students were eligible for free or reduced-price lunch.

The highest poverty rates are among African American, Hispanic, and American Indian families, and larger percentages of students of color attend high-poverty schools. Across all traditional public schools, enrollment is 52% students of color; in high-poverty schools, enrollment is 77% students of color. In charter schools overall, enrollment is 44% students of color; in high-poverty charter schools, enrollment is 93% students of color. A total of 567 (70%) of the state's high-poverty traditional public schools enroll 75% or more students of color; 694 (86%) enroll at least 50% students of color.

Students with other risk factors disproportionately attend high-poverty schools. Nearly half of North Carolina's 130,998 students who are currently, or have previously been identified as, limited English proficient attend high-poverty schools, comprising 16% of all students in these schools, more than twice the percentage in other schools. In addition, 64% of the students identified as having a disability are also economically disadvantaged, and 28% of North Carolina students with disabilities attend high-poverty schools (though they comprise only 12% of all students in North Carolina schools).

❖ Finding #2: Students attending high-poverty schools are far less likely to receive a sound basic education.

There is evidence of a strong negative relationship for at-risk students attending high-poverty schools and the attainment of a sound basic education. Analyses of data from the NCDPI demonstrate that, across the state, North Carolina's economically disadvantaged students have poorer schooling outcomes than do their more advantaged peers and that far too many do not obtain a sound basic education. Although 90% of students overall graduate in four years, the rate for economically disadvantaged students is only 82%. Even among those who graduate, only 40% met college- and career-readiness benchmarks on their EOC exams (as compared with 71% of those who are not economically disadvantaged students), and only 33% met the UNC system minimum entry requirements on the ACT exam (as compared with 65% of those who are not EDSs).

Attending a high-poverty school has a negative impact on a student's academic achievement. Income and educational achievement are positively correlated (Garcia & Weiss, 2017), so students from low-income families, on average, have lower achievement in school than their more advantaged peers. In addition, the composition of a school's student body has a significant impact on the educational outcomes of individual students, in addition to the impact of the students' own risk factors (such as poverty, limited English proficiency, or disability). Although a school's overall poverty level impacts all students, its impact is greatest on those students who are themselves economically disadvantaged. This has been found nationally in multiple studies (going back to James Coleman's landmark 1966 study, *Equality in Educational Opportunity*) and has been reconfirmed by our analysis of recent North Carolina data.

❖ Finding #3: The opportunity for a sound basic education is compromised at high-poverty schools, in large part due to less access to the *Leandro* tenets of qualified teachers, qualified principals, and sufficient educational resources.

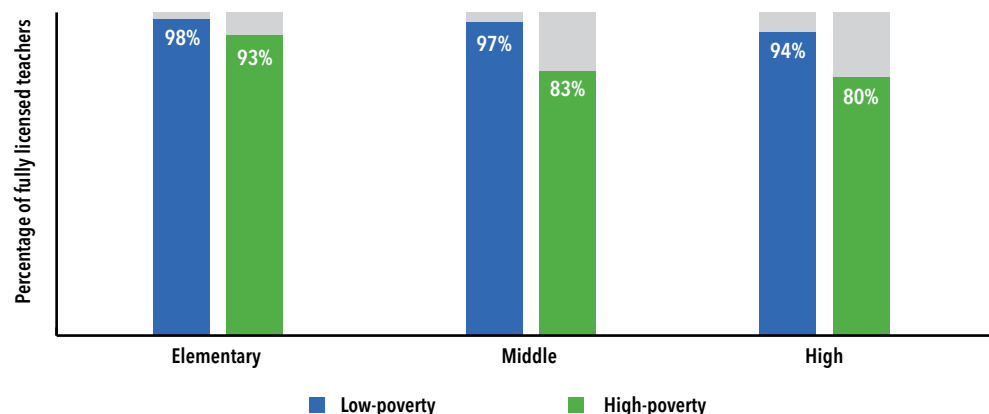
One of the most critical factors that impacts student achievement is teacher effectiveness. High-poverty schools are staffed by less-prepared and less-experienced teachers, and they have a much higher rate of teacher turnover than other schools. This problem is especially severe in high-poverty high schools, in which 20% of all teachers are not fully licensed and about 20% of teachers leave and need to be replaced each year.

The state accountability program’s strategy of sanctioning low-performing schools — most of which serve low-income and minority students in communities that have fewer resources — has made it even more difficult for these schools to attract and retain qualified teachers. The recruitment of untrained teachers into these hard-to-staff schools, through the state’s lateral-entry route, has strong negative effects on student achievement.

Educator pipeline policies that address preparation, recruitment, compensation, evaluation, and retention of the educator workforce limit the ability of high-poverty schools to attract and keep highly qualified teachers, which, in turn, affects the quality of instruction. Few certified and experienced teachers are attracted to teach or to stay in high-poverty schools, especially in rural high-poverty schools. Similar barriers exist, especially in rural and low-wealth areas, with respect to attracting and keeping effective principals and superintendents.

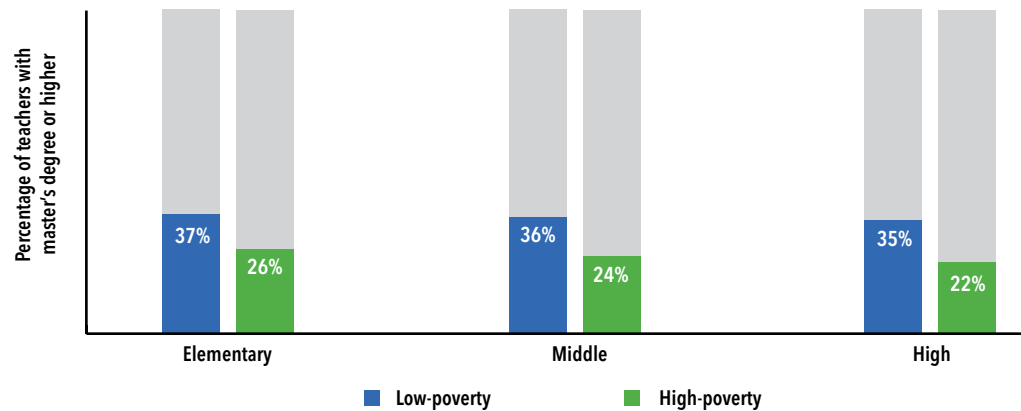
North Carolina’s high-poverty schools have fewer fully licensed teachers (Exhibit 44), fewer teachers with advanced degrees (Exhibit 45), and fewer National Board–certified teachers (Exhibit 46).

Exhibit 44. Fewer fully licensed teachers in high-poverty schools, 2017



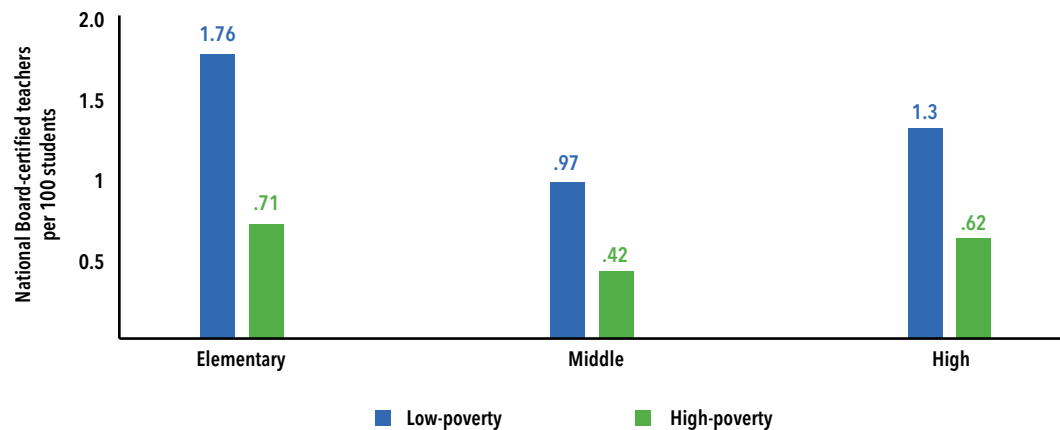
Source: Learning Policy Institute analysis of NCDPI data

Exhibit 45. Fewer teachers with advanced degrees in high-poverty schools, 2017



Source: Learning Policy Institute analysis of NCDPI data

Exhibit 46. Fewer National Board–certified teachers in high-poverty schools, 2017



Source: Learning Policy Institute analysis of NCDPI data

In addition, high-poverty schools have nearly double the one-year teacher turnover rates of low-poverty schools. And regarding the *Leandro* Leader Tenet, high-poverty schools' leaders have significantly less experience, as measured by principals' responses to the statewide survey conducted by our team (Exhibit 47).

Exhibit 47. Experience levels of principals at high- and low-poverty schools

	LPS	HPS
How many years have you been principal of this school?		
0–3	42%	64%
4–10	50%	30%
11+	8%	5%
Do you plan to continue to serve as principal at this school for at least three more years?		
No	6%	14%
Yes	82%	53%
Don't know	12%	33%

Source: Survey administered by WestEd to all principals statewide, 2018

Note: "LPS" stands for "low-poverty schools" and "HPS" stands for "high-poverty schools."

Other survey responses by principals in high-poverty schools show that they feel less prepared to perform the key elements of their jobs and less satisfied with the support they receive from their districts. More than a quarter (26%) reported that if they could get a higher-paying job, they would leave education as soon as possible.

❖ Finding #4: High-poverty schools often lack resources and opportunities that promote positive student outcomes and that are especially important for economically disadvantaged students.

Students in high-poverty schools are less likely to have access to challenging curriculum, including advanced high school courses and programs for students identified as gifted. For example, students in low-poverty schools are provided access to gifted programs at nearly five times the rate of students in high-poverty schools. At the high school level, there are dramatic differences in students' access to advanced curriculum offerings. At low-poverty high schools, 35% of students enroll in at least one Advanced Placement or International Baccalaureate course, which is more than four times the rate of students at high-poverty high schools (8%).

School climate greatly influences student outcomes. The research team examined schools' approach to discipline as a measure of school climate. The analyses highlighted that suspension rates are considerably higher in high-poverty schools than in low-poverty schools, and the difference is starkest in high school. The excessive use of suspensions undermines instructional time and student engagement.

North Carolina provides many valuable opportunities for its students to extend their learning through taking advanced courses, college courses, and career and technical education courses; participating in online virtual learning; and participating in sports, music, theater, academic competitions, community service, business internships, and other activities. These opportunities are of great value for students, helping prepare them for college, careers, and civic life and helping them acquire digital-age skills in the areas of critical problem solving, communications, collaboration, and creative thinking. North Carolina educators, communities, and legislators

are to be commended for providing many opportunities for students that go beyond the traditional classroom. Unfortunately, economically disadvantaged students, students in high-poverty schools, and students in low-wealth districts have less access to these programs and often face obstacles to being able to take advantage of the opportunities that do exist. For example, distance, lack of transportation, and inability to purchase supplies and materials are obstacles that their schools are often not able to fully remedy with their available resources.

The North Carolina Virtual Public School (NCVPS) provides a large variety of courses, ranging from credit recovery to Advanced Placement, intended to ensure that all students have access to the courses they need and desire. Although widely used, some schools limit students' access to NCVPS courses due to the costs to the schools in terms of reduced teacher allocations. This is especially true in the low-wealth districts that cannot afford to either replace the lost funding with local funds or reduce the number of teachers.

Since 2012, the College and Career Promise program has enabled high school students to enroll in college classes at North Carolina community colleges and universities, often for dual credit, enabling them to both meet high school graduation requirements and obtain college course credit. State funding is provided so that there are no tuition costs for either the student or the high school. The program has three pathways: College Transfer for those planning to continue their education and obtain an associate's or a bachelor's degree; Career and Technical Education for those planning to enter a certification or diploma program in a technical field or other career area; and Cooperative Innovative High Schools for those attending early college or other innovative high schools where they can work toward completion of both their high school diploma and an associate's degree or transferable college credit.

This program is widely used: In 2016–17, 61% of high school students earned college credit prior to their high school graduation, with 86% earning a grade of C or higher (Coltrane & Eads, 2018). However, there are barriers for some students being able to participate in and benefit from the program. Many economically disadvantaged students cannot afford the cost of college textbooks, lab fees, and other college fees, and they also struggle to find transportation to and from the college. In addition, high school schedules are often not aligned with schedules at the local community college. Misaligned schedules also present barriers for students who work after school and for those who depend on school busing for transportation and on food lunch programs for meals.

❖ **Finding #5: Students' equal opportunity for a sound basic education is limited in high-poverty schools by a lack of supports and services to help mitigate barriers to learning associated with adverse out-of-school conditions in communities of concentrated poverty.**

At-risk children living in communities of concentrated poverty and attending high-poverty schools experience adverse out-of-school conditions that place them at further risk and undermine their opportunity to obtain a sound basic education. These out-of-school conditions include poverty-level family incomes, family unemployment and underemployment, food insecurity and hunger, limited or no access to health care, high rates of childhood trauma, and unstable and unpredictable housing.³¹

31 These conditions were identified in interviews and focus groups (see also Galster, 2010).

Our analyses of data from the U.S. Census Bureau's American Community Survey in years 2012–2016 (U.S. Census Bureau, n.d.) documented the relative presence of these conditions in the census tracts where high-poverty schools and low-poverty schools are located. For example, on average, high-poverty schools are in communities where 64% of children under 18 live in families with incomes below 200% of the federal poverty level.³² In contrast, low-poverty schools are in communities with an average of 19% of children at this low-income level.

The *Leandro* ruling notes that at-risk students need more and different resources and interventions as compared with their more-advantaged peers to help counter the harms of the cumulative disadvantages associated with poverty. Effective strategies to address the need of at-risk students include high-quality pre-kindergarten programs, whole-child approaches to K–12 schooling, wraparound services, school support personnel available at ratios that meet national standards, and additional learning time and opportunities beyond the regular school day. Addressing the challenges faced by at-risk students also requires the involvement of nurses, counselors, social workers, and/or psychologists who have the training and expertise to address underlying issues, engage with families, and coordinate with community services and resources. It is well documented that North Carolina schools have a severe shortage of professionals in these roles, and those who are employed in the schools have caseloads far beyond what is recommended or manageable.

Students' basic foundational needs, such as the need for adequate nutrition, are fundamental to their ability to access their constitutionally guaranteed sound basic education. More than 20% of North Carolina's children were food insecure in 2016, with higher rates in low-income counties and in high-poverty schools (Feeding America, 2016). Recent studies have indicated that access to federally funded assistance such as SNAP and school meals may not fully alleviate food insecurity in students (Gassman-Pines & Bellows, 2018; Cotti, Goranier, & Ozturk, 2018; Edin et al., 2013). Students whose families earn below 130% of the poverty level are eligible for free meals, and schools are reimbursed fully by the federal government. A smaller subset of students (those whose families earn below 185% of the poverty level) qualify for reduced-price meals and pay a \$0.40 fee for their meals; even this \$0.40 fee can represent a burden to families and may lead to incurred lunch debt. In 2016–17, 64,153 students applied for reduced-price meals in North Carolina schools.

The Community Eligibility Provision (CEP), a part of the 2010 federal Healthy and Hunger Free Kids Act, allows schools that demonstrate significant need to offer free meals to all students. Through the CEP, high-poverty schools can eliminate the free and reduced-price application process and instead offer free meals to any student. Although some North Carolina schools make use of the CEP system to obtain additional federal funding, more could. Innovative approaches that address limitations of the traditional breakfast and lunch programs include breakfast kiosks that enable students to pick up their breakfasts at any time and eat between or during classes; school-based food pantries that provide food that students can take home; and mobile cafeterias that bring food to places where students can gather near their homes during vacation and in the summer.³³

32 A family income below 200% of poverty level is commonly used as the threshold to identify children living in poverty. See, for example, Kid's Count at <https://datacenter.kidscount.org/data/tables/47-children-below-200-percent-poverty?loc=35&loct=2#detailed/2/35/false/871,870,573,869,36,868,867,133,38,35/any/329,330>

33 These approaches are described in more detail in the report *Addressing Leandro: Supporting Student Learning by Mitigating Student Hunger* (Bowden & Davis, 2019), produced in tandem with this study.

❖ Finding #6: Current policies need to be revised in order to provide adequate funding and resources to high-poverty schools.

State policies that govern schools' financial resources, the teacher pipeline, supports for children and families, and school accountability could help to address the challenges described above, but many do not. Current policies create many of the systemic barriers facing high-poverty schools, or, at best, do not solve them. High-poverty schools in North Carolina are underfunded, especially given the rise in the number of North Carolina families living at or below the poverty line, and current funding policies do not address the challenges faced by these schools and their students. The steady decline in funding over the last decade has compromised the ability of high-poverty schools to provide the supports necessary to provide a sound basic education for at-risk students, particularly in low-wealth districts.

The resource allocation structure, particularly its allotment for teaching positions and some categorical programs, results in too few and inflexible resources for high-poverty schools — problems compounded by recent funding declines. The negative impact of the resource allocation structure is exacerbated by the inability of low-wealth districts to raise additional funds locally because of their lower tax base, something that counties with more robust economies and higher tax bases routinely do.

Recommendations

As is clear from the findings discussed above, the gap between what is currently available and what is required to provide every student with a sound basic education is wider in high-poverty schools than in other schools. Therefore, efforts are needed that focus on the specific requirements and challenges of high-poverty schools and that are sufficiently resourced to enable success. Without such efforts, the state will never fulfill its constitutional responsibility to provide every child with a sound basic education that will prepare them for college, career, and civic life. This section provides recommended actions for the state to take to more fully support and ensure the success of its high-poverty schools.

❁ 1. Attract, prepare, and retain a highly qualified, diverse, and stable K–12 teacher and leader workforce in high-poverty schools.

As noted in the section A Qualified and Well-Prepared Teacher in Every Classroom, North Carolina must correct the current statewide imbalance between teacher demand (the number of teachers needed) and supply (the number of individuals available to hire), particularly in high-poverty schools. The following recommendations focus on the highest-leverage actions for addressing the particular challenges involved in preparing, recruiting, supporting, and retaining teachers and leaders in high-poverty schools.

- » Set and make public an ambitious five-year goal of reducing the number of less-than-fully-qualified teachers and leaders in high-poverty schools to below 5% and the number of teacher-leaders with fewer than three years of experience to below 10%.

- » Include in teacher preparation and ongoing professional learning a specific focus on effective teaching and learning in high-poverty communities, including culturally and linguistically responsive teaching, whole-child approaches, trauma-informed practices, positive/restorative discipline methods, and supports that mitigate barriers posed by adverse out-of-school conditions.
- » Adopt competitive compensation and retention strategies — such as state-provided salary supplements to teachers in high-poverty schools in low-wealth counties — so that staffing at high-poverty schools is not compromised by local salary supplements offered in other counties/districts or by contributors to attrition.
- » Provide a meaningful supplement for principals who take a position to turn around a persistently low-performing school and provide protection against principals having a salary reduction if they go work in low-performing, hard-to-staff schools.
- » Provide teachers and leaders with special support, professional learning, and technical assistance related to working in high-poverty schools.
 - Strengthen the Regional Education Service Alliances to provide regional support for a professional learning infrastructure for educators in high-poverty schools (especially those in isolated counties) to network with and learn from one another.

2. Provide additional time, resources, and access to the programs and supports that meet the educational needs of all students in high-poverty schools, including at-risk students.

- » Provide expanded time and/or smaller class sizes for elementary and middle school students to help them keep pace with more-advantaged students.
- » Ensure that students in all high-poverty schools have access to college-readiness opportunities, including dual enrollment; advanced coursework and instructional materials (making sure such courses are culturally and linguistically responsive to diverse student populations — for example, by including ethnic studies courses); and other college-credit-earning opportunities.
- » Provide equitable access to career-readiness opportunities in all high-poverty high schools, including dual enrollment; apprenticeships; and high-quality career pathways that integrate CTE with rigorous academic courses. Several actions would ensure that all students have access to CTE programs:
 - Provide funding to partnerships among school districts, community colleges, and businesses to develop new CTE pathways to prepare students for jobs in local industries.
 - Provide funding to cover costs (e.g., transportation to internships) that may otherwise prohibit economically disadvantaged students from accessing CTE programs.
 - Provide approval and guidance for schools that seek to connect CTE and academic programs (e.g., by offering courses in which students can obtain both types of credits).

- » Remove barriers to students taking full advantage of the Career and College Promise program to take tuition-free college courses while in high school:
 - Provide funding for textbooks, lab fees, other college fees, and transportation to and from the college for students who cannot afford these costs.
 - Revise legislation to allow schools to align their schedules with their local community college (as misaligned schedules present barriers for students who work when school is not in session and who depend on school busing and school lunch programs).
- » In a way that does not result in a decrease in funding or in the allotment of teaching positions to the districts, revise the funding approach for the NCVPS to remove barriers that may prevent students in low-wealth districts from taking NCVPS online courses and to make the funding more consistent with the College and Career Promise approach.

• 3. Revise the school accountability system so that it credits successful efforts in high-poverty schools and supports further success.

A system that grades schools solely based on proficiency of students does not capture much of the growth, progress, and benefit that students in high-poverty schools attain. The state's current system of assigning each school a letter score, ranging from A through F therefore unfairly punishes schools that are serving students facing persistent challenges associated with living in poverty.

- » Include opportunity-to-learn indicators in the state's accountability system to enable a better gauge of the ability of high-poverty schools and other schools serving disadvantaged students to contribute to student success. These indicators include measures that can capture how students are experiencing learning, such as measures of school climate, chronic absenteeism, student suspensions and expulsions, extended-year graduation rates, and access to programs that support college and career readiness.

• 4. Provide comprehensive whole-child supports, including professional staff such as nurses, counselors, psychologists, and social workers.

- » Provide positional funding to increase the number of specialized school support personnel to meet the national guidelines (see Exhibit 48 below), beginning with providing positional funding to the state's high-poverty schools (as students in high-poverty schools and communities suffer more frequently from the stress factors that require these professional personnel and may have less access to other community-based services).

Exhibit 48. Ratio of specialized school support personnel to students

Specialized personnel role	National recommended ratio	North Carolina ratio (2019)
Nurse	1 per school	Districts range from 313 to 2,724 students per nurse
School counselor	1:250 students	1:367 students
Social worker	1:250 students	1:1,427 students
School psychologist	1:500–700 students	1:2,083 students

-
- 5. Provide resources, opportunities, and supports to address out-of-school barriers to learning that constrain schools' ability to meet the educational needs of all students in high-poverty schools.
-

North Carolina is well positioned to build on the considerable local interest in comprehensive, whole-child approaches and the integration of social supports into high-poverty schools. To accomplish this, the state should take the following actions:

- » Provide state funding, technical assistance, and a support infrastructure for high-quality community schools in high-poverty communities. Implementing a community-schools approach is one evidence-based approach to addressing out-of-school barriers to learning.
- » Provide districts with considerable support and flexibility to propose plans to the state that meet the schools' specific needs and include (1) wraparound services meeting health, social, and other child and family needs; (2) expanded learning time and opportunities, such as longer school days and/or years and after-school and summer programs; (3) family and community engagement; and (4) collaborative practices and leadership.

One fundamental way to address food insecurity in high-poverty schools is to extend the existing food programs to provide free breakfast and lunch to all students in high-poverty schools. The following actions are recommended:

- » Maximize the use of federal Community Eligibility Provision funding and provide additional state funding, when needed, to offer free breakfast and lunch to all students in schools with 50% or more economically disadvantaged students.
- » Provide state funding to offer free lunch to all students who qualify for reduced-price meals, as is currently the case for breakfast.
- » Provide grant funding to schools and districts to support the development, implementation, and evaluation of innovative programs and partnerships with other contributors to alleviate student hunger.

State Assessment System and School Accountability System³⁴



Critical Need: Revise the student assessment system and school accountability system. The systems should provide the information needed by educators, parents, policymakers and others about the educational effectiveness of each school and about the learning and progress of individual children and of subgroups of children. The system should also produce data to inform the evaluation and continuous improvement of educational programs and to enable the Court to track progress, identify areas of concern, and monitor compliance with the *Leandro* requirements.

This study examined both the state's student assessment system and its school accountability system. High-quality assessment systems enable schools, districts, and the state to measure the learning and growth of individual students as well as groups of students as they progress with their education. In order to measure and monitor progress toward meeting the *Leandro* requirements for all students, North Carolina must also have a comprehensive set of measures for evaluating the state's progress toward providing every student with access to a sound basic education.

ASSESSMENT

A high-quality assessment system that provides useful and timely data on student growth and proficiency is an integral component for ensuring a sound basic education for all students. Results from high-quality assessments, coupled with a thoughtfully designed accountability system, can provide valuable information about students' academic progress and inform stakeholders whether policies and practices are working as intended. A high-quality assessment system needs to serve multiple purposes reflecting the needs of multiple stakeholder groups, providing crucial information to support progress toward a sound basic education across all levels of the broader education system.

To examine the usefulness of assessments in North Carolina and to elicit ideas for how the state may better support the implementation of a high-quality assessment system, our research team conducted interviews with state-level stakeholders, including staff from the NCDPI, and with county-level administrators who oversee assessment and accountability for their districts. The research team also reviewed key court documents and numerous documents from the NCDPI website and surveyed principals from across North Carolina. The evaluation focused on the following:

- » How are statewide assessment results used by districts and schools to inform student and school improvement and close educational opportunity and achievement gaps?

³⁴ These findings are drawn from the following papers: *North Carolina's Statewide Assessment System: How Does the Statewide Assessment System Support Progress Toward Meeting the Leandro Tenets?* (Brunetti, Hemberg, Brandt, & McNeilly, 2019); *North Carolina's Statewide Accountability System: How to Effectively Measure Progress Toward Meeting the Leandro Tenets* (Cardichon, Darling-Hammond, Espinoza, & Kostyo, 2019). Briefs summarizing these papers can be found in the appendices.

- » What technical assistance, training, resources, and support does the NCDPI provide to help districts and schools interpret and use statewide assessment results for student and school improvement?
- » What gaps, if any, exist in the statewide assessment system? How do districts address or compensate for the gaps in the statewide assessment system?

Assessment Findings

- ❖ Finding #1: The state summative assessments meet federal requirements and are aligned to North Carolina academic standards, but lack some elements of rigor and depth that are articulated in the academic standards.

North Carolina's statewide assessment system complies with federal requirements under ESSA and meets the U.S. Department of Education's peer review requirements; however, there are several improvements that can be made to ensure that the state-provided and state-required assessments provide meaningful information to all stakeholders. Although statewide assessment results should not be the sole measure of academic progress, they can provide valid measures of progress, in conjunction with a high-quality accountability system, toward meeting the *Leandro* requirements.

An independent alignment study concluded that the state assessments are generally well aligned to the North Carolina academic standards (Smithson, 2015). College- and career-readiness standards and expectations, like those defined in the NC Standard Course of Study (NCSCOS), require students to demonstrate complex reasoning and problem-solving skills and to communicate effectively. To adequately assess the knowledge and skills defined in the NCSCOS, it is important for assessments to include opportunities for students to demonstrate their abilities to reason, solve complex problems, and communicate effectively. Assessment specifications reveal that the state summative assessments rely heavily on multiple-choice items. Heavy reliance on multiple-choice items lessens the cognitive demand of the assessment and de-emphasizes complex reasoning and communication skills, which are key attributes of college- and career-readiness standards. Further, assessments that rely heavily on multiple-choice items tend to influence teachers' instructional decisions, often resulting in a focus on lower-level cognitive skills.

- ❖ Finding #2: The state's achievement levels do not clearly indicate whether students are ready for college and careers or what is necessary for a sound basic education.

North Carolina utilizes five achievement levels (Levels 1–5) when reporting results for all state-required assessments that are utilized for accountability. The state originally planned and set cut scores for four achievement levels on its state assessments. The lower two levels described the need for additional academic support, and the higher two levels described meeting or exceeding the state's proficiency standard. In March 2014, the North Carolina State Board of Education added a fifth achievement level describing "on-grade-level" proficiency. The methodology for establishing the additional level was atypical, as it is not common to establish a new achievement level after setting cut scores through a formal standard-setting process. This decision created two

standards of proficiency, one for meeting the grade-level proficiency standard and one for meeting the college- and career-readiness standard, respectively.

This means that within North Carolina's five achievement levels, there are two levels that ostensibly describe meeting the state's proficiency standard: Level 3, which means achieving on-grade-level proficiency, and Level 4, which means achieving college and career readiness. (Level 5 reflects scores that exceed the state's proficiency standard.) North Carolina's READY accountability system and school performance grade are determined by the proportion of students who achieve Level 3 (i.e., on-grade-level proficiency). The detailed description of Level 3 articulates the need for additional academic support to reach college and career readiness. It is typical for a state assessment program to have just one achievement level that describes the state's proficiency standard, rather than two levels, as in North Carolina.

Judge Manning's decisions on *Leandro* also emphasized that the minimum performance standard under *Leandro* is performance at or above grade level, and that meant the college- and career-readiness level:

"Level III performance [in the system at that time] on EOG tests is performance at or above grade level and defined as: students performing at this level consistently demonstrate mastery of grade-level subject matter and skills and are well prepared for the next grade level. ... The Court has determined that the minimum level of academic performance under Leandro is performance at or above grade level. ... Academic performance below grade level ... is a constitutionally unacceptable minimum standard, and the State of North Carolina's argument that academic performance below grade level is sufficient is rejected" (Manning, 2000, pp. RS 19–21).

❖ Finding #3: There are opportunities to increase coherence between curriculum, instruction, and assessment in North Carolina.

The state sets the academic standards through the NCSCOS and LEAs determine which curriculum and instructional materials to use. Although there are no curricular materials vetted or endorsed by the state, the NCDPI provides instructional support materials through its website. Specifically, these materials include documents that help educators understand the expectations of academic standards and crosswalk documents, graphic organizers, glossaries of key terms, vertical progressions, and specifications that describe which standards are assessed on each NC Check-In (described in Finding #4). County central office staff that were interviewed suggested that the support and resources available to educators are variable across districts (e.g., larger districts with more resources tend to develop their own curriculum guides, resources, and training to support instruction, whereas smaller districts must rely on limited instructional resources).

❖ Finding #4: Supporting assessment for learning, including interim assessments, can enable a more balanced and student-centered assessment system.

The State Board of Education and the NCDPI's report to the General Assembly on testing transparency, per §115C-174.12 (d), and the Interactive Local Testing Report, are important first steps to ensuring balance and

efficiency within the statewide assessment system.³⁵ However, awareness alone will not remediate inefficiencies in the assessment system. It is critical for state education agencies and LEAs to develop a shared understanding of the elements of comprehensive and balanced assessment system (Sigman & Mancuso, 2017). Efficient use of assessments minimizes testing time. The testing transparency and local testing reports provide an opportunity for the NCDPI to articulate a suggested assessment framework and to build assessment literacy (i.e., the appropriate use of assessment types and assessment data) across the state. The NCDPI, the State Board of Education, and the General Assembly are involved in ongoing efforts to improve the assessment system in North Carolina. Beginning in 2014 with the appointment of the Task Force on Summative Assessment, policymakers became keenly aware of the importance of balanced and efficient use of assessments in North Carolina (Guindon, Huffman, Socol, & Takahashi-Rial, 2014). The task force introduced the through-grade assessment model, which resulted in a proof-of-concept study and the development of the NC Check-Ins, which are optional interim assessments developed by the state that are freely available to all LEAs across North Carolina. Through-grade assessment models utilize multiple interim assessments throughout the school year in lieu of a single summative assessment at the end of the year. Based on our interviews with district assessment leaders, the NC Check-Ins have been well received by educators and show promise as a widely usable interim assessment tool.

❖ **Finding #5: There is a lack of alignment between the state assessment system and the state's theory of action as articulated in its ESSA plan.**

North Carolina's theory of action, as stated in its ESSA plan, is focused on creating an adaptive and personalized learning environment for every student. Although that theory of action is commendable, there is little evidence within the remainder of the ESSA plan, or elsewhere, to indicate that the statewide assessment system is aligned to that theory of action. As the state transitions toward increased personalization of education, ensuring coherence and alignment of curriculum, instruction, and assessment will be critical to the success of its vision.

Personalized, or student-centered, education is typically designed to provide instruction, student supports, and learning experiences that are tailored to and aligned with individual students' assets, learning needs, interests, aspirations, and cultural backgrounds. Each student has a personalized learning plan with clear goals and milestones. Moving North Carolina to a more personalized approach has major implications for the way students are assessed and how assessment results are used. Yet the relationship between the state's vision for personalized learning, the current state assessment system, and the proposed assessment system, as described in the ESSA plan's theory of action and the state's Innovative Assessment Demonstration Authority application, is not clear. The theory of action describes "using real-time assessment strategies to inform classroom instruction, as opposed to using extensive, overbearing summative assessments as the main tools to inform instruction." While this is certainly good assessment practice, it is not necessarily personalization.

Our analysis of the North Carolina assessment system reinforces the strong need for the state and LEAs to develop the human capacity and aligned support structures necessary to ensure strong, standards-aligned instruction, effective use of assessments and other data to inform teaching, and adoption and use of curriculum

35 <http://www.ncpublicschools.org/docs/accountability/home/testing-transparency.pdf>

and instructional materials aligned to the state’s standards and designed to engage students in demonstrating and applying their learning.

Assessment Recommendations

1. Establish a more balanced and student-centered assessment system.

The NCDPI should continue to promote the use of the NC Check-Ins and provide guidance to LEAs to streamline the number of assessments at the local level, mitigating the use of multiple assessments for similar purposes. If LEAs choose to administer the NC Check-Ins, they could reduce or discontinue the use of many of their local assessments, which would lead to reductions across the state in the time spent testing, as well as to the potential for cost savings for LEAs using commercial interim assessments. More extensive use of the NC Check-Ins might enable the NCDPI to be more efficient with disseminating resources and support materials across the state. Further, the NCDPI should provide stronger guidance and resources to LEAs on the use of data from the NC Check-Ins, end-of-year assessments, and the Education Value-Added Assessment System (EVAAS) to inform student and school improvement and close educational opportunity and achievement gaps. Educators noted the value of the NC Check-Ins as timely formative assessments that can inform instruction, although they expressed concerns about changes that would be required if these began to be used as part of high-stakes summative assessments.

2. Clarify alignment between the assessment system and the state’s theory of action.

To enact the guiding principle and theory of action in North Carolina’s ESSA Consolidated State Plan, the NCDPI should clearly define how the assessment system supports personalized learning — unique learning experiences for students (e.g., authentic assessments, real-time assessments, competency-based progressions), including curricular and instructional resources to support personalized learning environments. These elements are substantially missing in the current system and are central to college and career readiness. Further, the NCDPI should formally articulate and thoroughly develop an action plan for scaling up personalization across the state, including how such a system will ensure a sound basic education for every student in North Carolina.

Breaking up end-of-year assessments into several interim assessments will allow for more immediate use of assessment data within the school year, which can provide educators with meaningful data to adjust instruction within the school year. However, it is also critical that educators understand how to use the assessment data to personalize instruction. In order to successfully implement personalized instruction, educators need significant professional development, including on high-quality curricular and instructional resources and the use of formative assessment practice. Well-designed instructional support materials and a robust communication and dissemination strategy will be needed to fully support North Carolina’s vision for more personalization and, ultimately, improved student learning as measured by its assessment system.

• 3. Include additional item types that provide a broader understanding of students' knowledge, skills, and abilities.

The NCDPI should consider including additional item types (i.e., constructed-response, extended-response, and/or performance-based assessment items) on the state summative assessments. Items that require students to demonstrate application of their knowledge and skills can provide information on students' understanding that can be applied to improve teaching and learning and that can monitor progress toward a sound basic education for all students in North Carolina. These item types are essential for assessing college and career readiness.

Because assessments are inextricably linked to curriculum and instruction, the NCDPI should consider providing additional curricular and instructional support materials to complement the inclusion of constructed-response and performance-based items on the assessments. Given the timeline necessary for developing and field-testing assessment items, these new items could be integrated into the state tests by spring 2021 or spring 2022.

• 4. Improve coherence among curriculum, instruction, and assessment.

In addition to making fundamental improvements in the state's assessments, improving educational outcomes for all students requires an extensive and collaborative effort at all levels of the system to strengthen the connection between curriculum, instruction, and assessment. It is unreasonable to expect assessment results to improve without significant investment in aligned educational resources, including high-quality curricular and instructional materials.

Although the NCDPI provides instructional support materials via its website, there is a critical need for the provision of additional and ongoing support to LEAs to implement the effective use of high-quality curricular and instructional materials across the state. Implementation of the standards has proved to be a challenge for educators, particularly in finding and using high-quality instructional materials aligned to the standards. To promote the use of high-quality, aligned curricular materials, the NCDPI should bolster professional development efforts and state-provided resources related to standards-based instruction and standards implementation.

• 5. Revise achievement levels to align with the Court's standard of a sound basic education.

The state currently has two achievement levels that meet the state's proficiency standard.

A more coherent and singular definition of proficiency, aligning grade-level expectations and college- and career-ready expectations, is needed to provide stakeholders with consistent and actionable measures of student progress and proficiency. Likewise, the stakeholders should be confident that achievement-level classifications translate to students' knowledge and skills that both prepare students for the next grade and make them college and career ready. The *Leandro* ruling requires college and career readiness; achievement level classifications must align to this standard. To promote proper interpretation of achievement results, the NCDPI should revise the achievement level descriptors for the state summative assessments to better reflect the qualities of a

sound basic education as defined by the Court and to better reflect college and career readiness, using a valid standard-setting process.³⁶

ACCOUNTABILITY

To investigate the adequacy of the accountability system, the research team conducted an evidence-based assessment of North Carolina's current accountability and improvement system, including its approach under ESSA and the data available through the state's longitudinal data system, focusing on the measures of progress needed to demonstrate equal access to a sound basic education as required under *Leandro*. This included reviewing research on evidence-based indicators of opportunity and outcomes and the appropriate measures and use, reviewing research on the use of growth in addition to status with regard to performance on school indicators, and reviewing effective approaches to school assessment and identification for improvement and support.

Based on a review of prior research, the research team posed the following questions to guide the study:

- » How does the state's accountability and improvement system need to be designed to assess whether schools are meeting the requirements of *Leandro* or making progress toward those requirements?
- » How can this system meet the requirements under *Leandro* and under ESSA?
- » Which indicators of performance should be included in this system, how should they be measured, and for what purpose should they be used?
- » What are the benefits of considering both growth and performance on each indicator?
- » What is the most effective and efficient way to use data from these indicators to assess school performance and progress toward meeting the *Leandro* tenets and inform the most efficient and effective use of resources?
- » What are some promising evidence-based interventions and supports?

To answer these questions, the research team drew on existing studies, examined every state's ESSA plan, including North Carolina's, consulted with national accountability and improvement experts, and conducted new analyses of state and federal data.

In addition to identifying a set of measures of progress toward providing every student with access to a sound basic education, the state must establish an accountability system for using these measures to identify how to address districts and schools not providing a sound basic education, including actions that are necessary and programmatic initiatives that need to be implemented. The Court's requirements provide North Carolina with an

36 The Request for Proposals #40-RQ21813651, released in March 2019, indicates that the NCDPI may have begun the process to conduct standard-setting activities to revise the achievement levels and standards for proficiency on its statewide end-of-year assessments.

opening to develop a full set of research-based measures of students' opportunity to learn and equal access to a sound basic education, including students' access to:

- » An inclusive and supportive learning environment (e.g., using measures of school climate, chronic absenteeism, and suspension)
- » College preparatory coursework (e.g., the proportion of students who are enrolled in individual course sections, who complete their coursework, and who are earning college credit) and high-quality CTE coursework
- » High-quality curriculum and other learning materials, such as digital learning resources
- » Fully qualified and experienced teachers
- » National Board–certified teachers
- » Highly qualified principals

Accountability Findings

Further information about the current system and three critical flaws identified by the research team is provided below, followed by recommendations for actions needed to remedy the flaws.

❖ **Finding #1: North Carolina's accountability system is primarily based on measures of student performance on summative assessments and does not include, or uses only in limited ways, a number of opportunity-to-learn indicators that can provide information to help ensure that all students have the opportunity for a sound basic education.**

Opportunity-to-learn indicators include measures that can capture how students are experiencing learning, such as measures of school climate, chronic absenteeism, student suspensions and expulsions, extended-year graduation rates, and access to programs that support college and career readiness. Research shows that data from these types of indicators can provide the state, districts, and schools with information needed to determine the actions that are required to ensure all students have the opportunity for a sound basic education. In addition, in a recent survey of North Carolina principals conducted as part of this project, respondents identified school climate and safety, access to fully certified teachers, and access to a college- and career-ready curriculum as important indicators of equal access to a sound basic education.

North Carolina has begun initiatives to support schools in these areas, including, for example, the College and Career Promise program that enables many high school students to take college courses and the implementation of the Positive Behavior Intervention and Supports approach to better address school discipline and safety issues. North Carolina also states in its ESSA plan, submitted in 2017, that it will consider incorporating additional indicators, such as chronic absenteeism, school climate, and a college- and career-ready index, in its accountability system, and although it already collects relevant data, it has not yet taken action to incorporate the additional indicators.

-
- ❖ Finding #2: The accountability system emphasizes students' proficiency status over growth, which results in a strong bias against schools that largely serve economically disadvantaged students and fails to credit these schools with successful efforts that are foundational to their students' receiving a sound basic education.
-

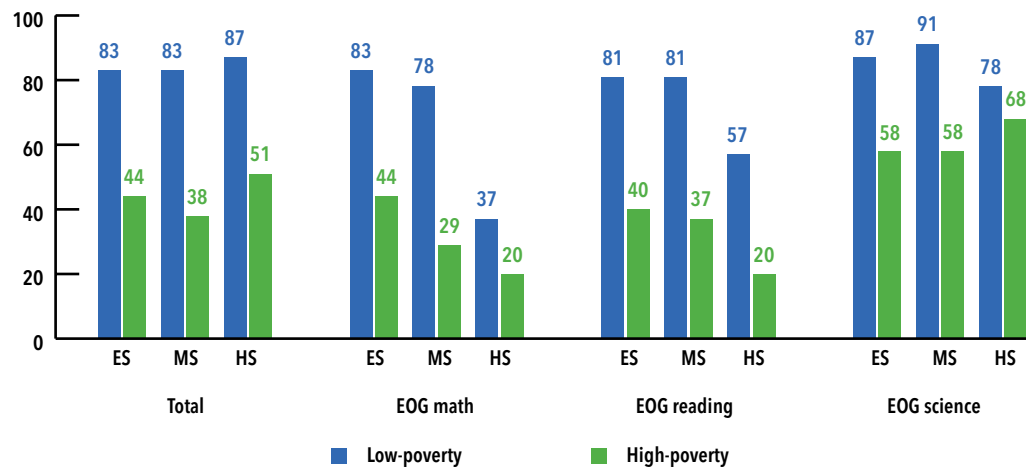
North Carolina measures school performance for elementary and middle schools based on: (1) English language arts/reading and mathematics test scores; (2) science test scores; (3) the progress of students who are learning English; and (4) growth (measured by the EVAAS, a value-added growth model that includes student performance across years on ELA, mathematics, and science assessments, which results in a composite growth value). For high schools, North Carolina measures school performance based on: (1) ELA/reading and mathematics test scores; (2) growth (measured by the same assessments across years); (3) performance on the biology EOC assessment; (4) math course rigor (measured by the percentage of students passing the North Carolina Math 3 course); (5) the four-year graduation rate; (6) English learners' progress; and (7) student performance on ACT and ACT Workkeys college- and workforce-readiness exams.

Using the above-described performance measures, North Carolina designates schools as earning a single summative score of A, B, C, D, or F based on a weight assigned to each measure. For elementary schools, 20% of the weight is based on student growth and 80% on performance on ELA/reading and mathematics test scores, science test scores, and English learner progress. For high schools, 20% of the weight is based on growth on the statewide ELA/reading and mathematics assessments and 80% on performance on ELA/reading and mathematics test scores, the four-year graduation rate, English learners' progress, performance on the biology EOC assessment, math course rigor, and performance on ACT and ACT Workkeys exams.

Research demonstrates that there is a strong negative relationship between achievement measures and poverty at the school level. Therefore, focusing primarily on achievement to evaluate school performance biases the evaluation system against schools that serve large percentages of economically disadvantaged students and rewards schools with wealthier populations. Schools that serve largely EDSs enroll many new students who are well below grade-level proficiency. These schools may foster significant growth of their students, but still have many students whose test results are below the proficiency standard for their grades. In addition, despite fostering a high level of growth, these schools' overall proficiency level may remain relatively low because low-achieving students are continually entering in lower grades and higher-achieving students are graduating.

This relationship between poverty and school outcomes in North Carolina public schools is demonstrated by Exhibits 49, 50, and 51 below. Exhibit 49 clearly shows that there is a large difference in overall proficiency scores between high-poverty and low-poverty schools and in math, reading, and science and that this difference holds at the elementary, middle, and high school levels. Overall across the three subject areas, the percentages of proficient students in high-poverty and low-poverty schools differ by 39 percentage points in elementary school (44% vs. 83%), 45 percentage points in middle school (38% vs. 83%), and 36 percentage points in high school (51% vs. 87%).

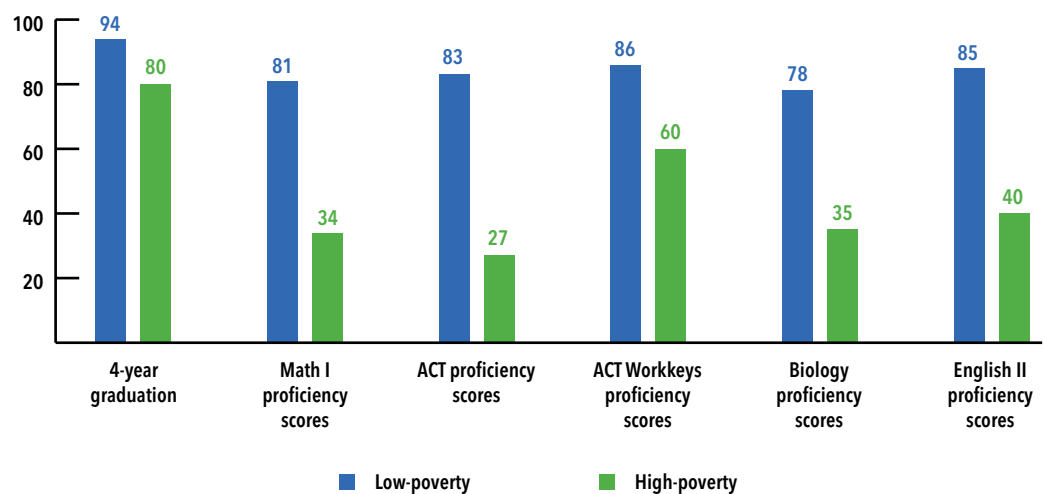
Exhibit 49. Math, reading, and science proficiency in North Carolina in high-poverty vs. low-poverty schools



"ES" stands for "elementary school"; "MS" stands for "middle school"; "HS" stands for "high school."

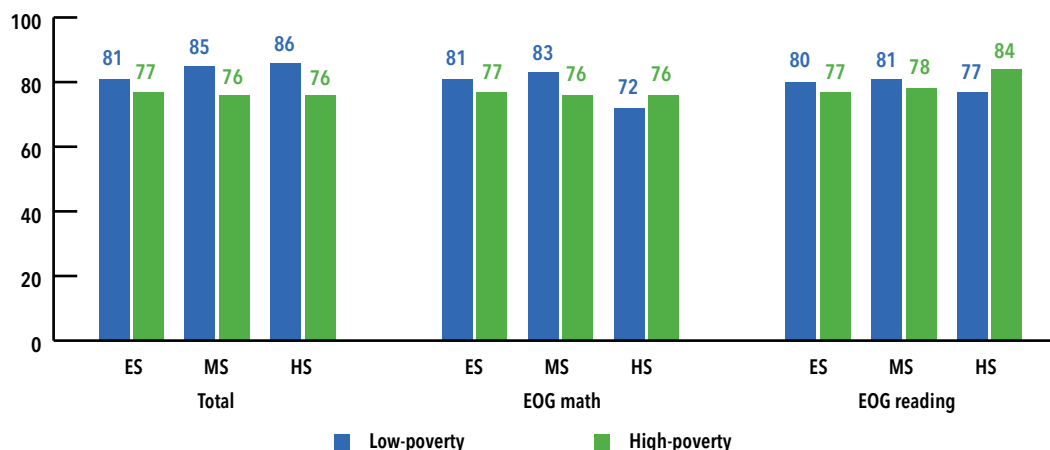
Exhibit 50 shows that there are also large differences in the other achievement measures used in high schools.

Exhibit 50. Math, English, biology, and ACT proficiency and graduation rates in North Carolina in high-poverty vs. low-poverty schools



In contrast, Exhibit 51 clearly shows that the differences between high-poverty and low-poverty schools in the overall growth measure is much smaller, no more than 7 percentage points in math and in reading across the three grade levels and that growth in both subjects at the high school level is larger in high-poverty schools than in low-poverty schools.

Exhibit 51. Growth in math and reading proficiency in North Carolina in high-poverty vs. low-poverty schools



"ES" stands for "elementary school"; "MS" stands for "middle school"; "HS" stands for "high school."

The educators who participated in site visits for this project underscored that the bias in the accountability system against high-poverty schools has multiple detrimental effects relevant to the *Leandro* requirements: (1) It fails to credit dedicated and successful efforts of the educators, parents, and students to further student growth; (2) it provides minimal credit for gains, even when significant, of students who still fail to reach the proficiency level; (3) it can lead to schools focusing undue effort on students who are below the proficiency level but close enough that they may reach it while providing less support for students who are far enough below proficiency that they are unlikely to reach it during the school year; (4) it sets up an expectation in high-poverty schools that they will receive a D or an F grade no matter how much they advance their students' growth, given where their students start, which is discouraging to everyone in the school community; (5) it leads to teachers and administrators seeking to leave the school to move to lower-poverty schools in which it is easy to obtain a high grade; and (6) it leads parents to seek to move their children to other schools, furthering the instability these schools face.

Schools that foster strong growth but have many students who enter the school well behind in proficiency can be classified as among the lowest-performing schools within the current system, whereas schools that do not foster much growth but mostly have students who enter at high levels of proficiency will be treated as high-performing schools. This system should be improved to better identify schools that are producing significant growth as effective and those that are not as ineffective. These latter schools are the ones in which significant interventions and supports would be most warranted and most valuable in furthering the state's effort to provide every student with the opportunity for a sound basic education.

❖ **Finding #3: The accountability system does not take critical factors into account when determining which schools are identified as being among the lowest-performing schools in need of state-provided interventions and supports.**

As required by ESSA, North Carolina identifies the lowest-performing 5% of schools based upon the A–F rating as well as all high schools with a four-year adjusted cohort graduation rate at or below 66.7%. Many other states have

or are in the process of moving away from single-grade school accountability systems and provide approaches that can inform improvement in North Carolina's system.

Under ESSA, North Carolina weights performance on a limited number of indicators and rolls up performance into a single summative rating (assigning a rating of A, B, C, D, or F). This approach to describing and reporting school success focuses attention on the summative rating and obscures performance on individual indicators and whether they are improving. Important factors and data related to school performance can be overlooked when they are buried beneath a single summative score — meaning that schools identified for improvement may not have a clear understanding of where and how they should focus their attention. This can result in students' and schools' specific needs being unidentified and unaddressed.

There is no requirement under ESSA that states produce a single summative score on which to rank schools and identify the lowest-performing 5%. Other approaches to identifying the lowest-performing 5% of schools are allowed. Further, the requirements under *Leandro* are not limited to the lowest-performing 5% of schools. Therefore, the system needs to be designed to identify any low-performing school and the interventions or supports needed to improve students' learning opportunities and outcomes. Considering the full set of measures, discussed above, to determine school performance and eligibility for interventions and support provided by the state can enable a more strategic and responsive approach to targeting resources to the schools most in need.

North Carolina's current accountability system under ESSA includes some indicators that could be used to measure progress on access to a sound basic education; however, as a whole, the state's system does not provide all the information necessary to demonstrate that schools are meeting the constitutional requirement.

Accountability Recommendations

As documented in the Accountability Findings section above, North Carolina has in place systems for collecting and analyzing a wealth of data that are critical to tracking schools' and districts' current status and progress each year in meeting the *Leandro* requirements. The North Carolina School Report Cards (the School Report Cards) make some of these data readily accessible online to inform parents, educators, and other stakeholders. Additional data and analyses useful for informing education policies and plans are available on the NCDPI website.

Although the current accountability system provides a solid foundation of data, the School Report Cards merit additional data and improvements in order to more fully address the *Leandro* requirements and enable the Court to effectively monitor progress toward full compliance. Most important, the current system assigning A–F school ratings can mask performance on individual indicators of opportunity and outcome and progress toward meeting each of the requirements under *Leandro*.

Although the state will need to do further analysis and planning based upon stakeholder input and reviews of plans and prototypes, the school accountability revision process should include careful consideration of the following recommendations that are based upon research-based practices and are largely consistent with elements of new accountability systems that other states have or are in the process of implementing.

-
- 1. Amend the current accountability system, including the information provided by the North Carolina Dashboard, to include measures of progress toward providing all students with access to a sound basic education, a number of which North Carolina currently uses.
-

These include the following:

Measures of student **opportunities to learn**, such as:

- » Tracking student access to competent and well-trained teachers and leaders, including tracking teacher qualifications
- » Measuring students' access to college- and career-readiness courses of study in an effort to open up evidence-based pathways to future success that help youth reach their potential and that encourage schools to offer these opportunities to students
- » Tracking suspension and expulsion rates while removing zero-tolerance discipline policies, which have proven ineffective in improving students' performance, and replacing them with restorative justice practices
- » Including measures of school climate, which is associated with student achievement and educational attainment, for all groups of students, with special attention to those who are most vulnerable
- » Including chronic absenteeism as an accountability indicator under ESSA and creating approaches to intervene early and support attendance where needed to increase learning time

Measures of student **outcomes**, such as:

- » Including an extended-year graduation rate (e.g., five, six, or seven years) as an accountability indicator under ESSA, as well as a four-year rate, to encourage high schools to work with and bring back young people who, for a variety of reasons, could not graduate in four years
- » Measuring students' completion of college- and career-readiness courses of study
- » Measuring and reporting on student performance below or above the proficient level (e.g., in an achievement index)

-
- 2. Include in the North Carolina Dashboard state, district, and school performance and growth (both overall and by student subgroup) on a comprehensive set of measures that would indicate progress toward meeting the *Leandro* tenets and is inclusive of the reporting requirements under ESSA.
-

These include the following:

- » Performance and growth on indicators of postsecondary education and vocational readiness, such as:

- Achievement, measured by:
 - o Student performance on annual assessments, including math, English language arts, science, history, and geography
 - o Student growth on annual assessments, including math, ELA, science, history, and geography
 - o The number and percentage of English learners achieving English language proficiency
- Graduation rates, measured by:
 - o Four-year adjusted cohort graduation rate
 - o Five-, six-, and/or seven-year adjusted cohort graduation rate
- College and career readiness, measured by:
 - o Student performance on the ACT/SAT college entrance exam, the Advanced Placement exams, the International Baccalaureate exams, and the ACT Workkeys assessment on career readiness
 - o Students earning a seal of biliteracy
 - o Students earning an advanced state diploma
 - o Students earning postsecondary education credit
 - o Students earning industry credentials or completing a CTE program
 - o Students on track to graduate based on credit accumulation, grades, attendance, and behavior
- Long-term student outcomes, measured by:
 - o Postsecondary enrollment, attendance, and completion rates
 - o Workforce training program completion
 - o Military enlistment
- » Performance and growth on indicators of opportunities to learn and access to a sound basic education, measured by the data described in the first recommendation
- » Teacher qualifications, as measured by:
 - Number and percentage of fully licensed teachers, lateral-entry teachers, and teachers with an emergency certification
 - Percentage of teachers with advanced degrees
 - Percentage of National Board–certified teachers
 - Percentage of teachers with fewer than three years of teaching experience
 - Percentage of teachers assigned outside their area(s) of certification
 - One-year teacher turnover rates

- Percentage of chronically absent teachers (defined as absent 10% or more of the school year)
- » Principal qualifications, as measured by:
 - Years of principal experience
 - Principal performance on evaluation
 - Annual average principal turnover at the district level
- » Preschool access as measured by the number and percentage of students enrolled in preschool programs
- » Funding for early childhood programs as measured by the per-pupil expenditures using federal, state, and local funds
- » Funding and resources, as measured by:
 - Financial supports, including federal, state, and local contributions
 - Ratio of students to guidance counselors, social workers, and librarians
 - Average class size

• 3. To measure progress toward meeting the requirements of *Leandro*, North Carolina’s accountability system should be structured to reward growth in school performance on an indicator, in addition to status on select indicators.

Doing so will enable the state to credit schools for their significant gains in student growth for students overall and for subgroups of students, will broaden the state’s understanding of progress achieved by all schools, and will recognize the successful efforts of teachers and administrators in high-need schools.

• 4. Use a process for identifying schools for support and improvement that includes a set of decision rules to meet the requirements under ESSA and *Leandro*.

Depending on how it is constructed, a decision-rule approach can encourage greater attention to the full dashboard of measures, offer more transparency about how school performance factors into identification, and support more strategic interventions than those informed only by a single rating, ranking, or grade. Although summative scores determined by an index can be simple to create and understand, they could fail to identify schools and/or subgroups of students with acute levels of low performance on particular indicators that get masked when rolled into a single rating. Several options for decision rules are developed in *North Carolina’s Statewide Accountability System: How to Effectively Measure Progress Toward Meeting the Leandro Tenets* (Cardichon, Darling-Hammond, Espinoza, & Kostyo, 2019), one of the 13 study reports produced by the *Leandro* research study teams. Below, the researchers offer two options for utilizing decision rules, constructed based on the indicators within North Carolina’s current system for high schools.

Option 1: Identify schools with the lowest performance on the greatest number of indicators.

One of the simplest ways to use decision rules is to look at schools' performance level on all applicable indicators, with ELA and mathematics achievement as separate indicators. The state would initially identify those with the greatest number of low ratings — for example, several 1s on a scale of 1 through 4 — among the academic indicators. This method weights all indicators equally. In the example given in Exhibit 46, academic indicators comprise five of the nine indicators and are thus more heavily weighted. Note, however, that this option will give greater weight to academics only if the state has more academic indicators than School Quality or Student Success (SQSS) indicators.

The example provided in Exhibit 52 shows a set of five high schools, each receiving a rating, on a scale of 1 through 4, based on performance and growth on the given indicator. School B would be identified as a Comprehensive Support and Improvement (CSI) school first, since it has the greatest number of 1s. If the state were to identify more schools (e.g., because it had not yet identified 5% of all schools), School C would be designated as a CSI school next.

Exhibit 52. Identification by counting the number of areas of low performance

Indicator	Academic indicators					SQSS indicators				Number of "1" indicators
	ELA	Math	Growth on ELA and math	Graduation rate	English learner progress	Biology EOC test	ACT	ACT Work-keys	Math course rigor	
School A	1	2	2	3	1	3	2	3	3	2
School B	1	1	1	2	1	2	1	2	1	6
School C	2	1	1	2	1	1	1	2	2	5
School D	3	4	3	4	2	3	4	2	4	0
School E	3	3	3	3	4	3	3	3	4	0

Option 2: Identify schools with the greatest number of low-performing indicators, but give certain academic indicators greater weight.

The other option is similar to Option 1 in that it would look at performance levels on all applicable indicators, but it differs from Option 1 in that it would weight certain indicators more or less than others (see Exhibit 47). Each 1, the lowest score possible, would earn a school a point, and if an indicator has a weight of 2, it would count as an additional 1. This option can ensure much greater weight for academic indicators.

In the example provided in Exhibit 53, both schools A and B earned a 1 on two different indicators. However, since ELA is weighted more heavily, School A receives 2 points, whereas School B receives 1 point. School A would thus be identified for intervention first.

Exhibit 53. Identification by counting the number of areas of low performance with indicators weighted

Indicator (weight)	ELA (2)	Math (2)	Growth on ELA and math (2)	Graduation rate (2)	English learner progress (2)	Biology EOC test (1)	ACT (1)	ACT Workkeys (1)	Math course rigor (1)	Number of weighted "1" indicators
School A	1*	2	2	2	3	2	2	2	3	2
School B	2	3	2	2	2	1	2	3	2	1

**This score is counted twice because the indicator has a weight of 2.*

-
- 5. Use data from the accountability system at the state, district, and school levels to guide planning and budget decisions and to assess school progress and improvement efforts.
-

To support districts in making these planning and budget decisions, all districts should complete a state-provided accountability plan that requires them to articulate their three-year policy goals and accompanying budget allocations across the *Leandro* tenets. These plans should be updated annually in response to data on how all schools in the district, including alternative schools, are progressing in meeting the requirements under *Leandro*. All districts in the state should be required to complete the accountability plan.

-
- 6. Use the data provided in the North Carolina Dashboard to identify the appropriate evidence-based interventions and supports.
-

A large body of educational research has explored practices that are effective and ineffective for improving student outcomes. This research can empower state and local policymakers to adopt proven educational interventions that best address the unique context of their local education system. These may include:

- » High-quality professional development
- » Community schools and wraparound services
- » High school redesign
- » Class-size reduction

Regional and Statewide Supports for School Improvement³⁷



Critical Need: Build an effective regional and statewide system of support for the improvement of low-performing and high-poverty schools. The state should define its approach to school improvement and develop the state system for assisting low-performing and high-poverty schools to recruit and retain effective staff; provide high-quality professional development; use evidence-based instructional practices and curricula; create effective school cultures; provide student supports; use data for continuous improvement; engage families; and foster collaborations across schools and districts.

This section draws upon findings from four of the studies for this project. These studies assessed the state's capacity to provide systematic support for educational improvement throughout North Carolina, focusing on addressing challenges and opportunities in high-poverty schools; providing a qualified, well-prepared teacher in every classroom; and providing a qualified, well-prepared principal in every building. Collectively, the findings from these studies inform an approach to continuous improvement in North Carolina's low-performing and high-poverty schools through a regional and statewide system of support.

Research Topics

In order to better understand North Carolina's current practices and opportunities for school improvement, the study team focused on the following questions:

- » What is the current state and regional capacity for improving low-performing schools and schools serving students with the greatest need?
- » What technical assistance, training, resources, and support does the NCDPI currently provide to help districts and schools build capacity to meet the educational needs of every student?
- » What opportunities exist at the state and regional level to provide supports critical to the *Leandro* tenets, including training for principals, to lead school improvement?

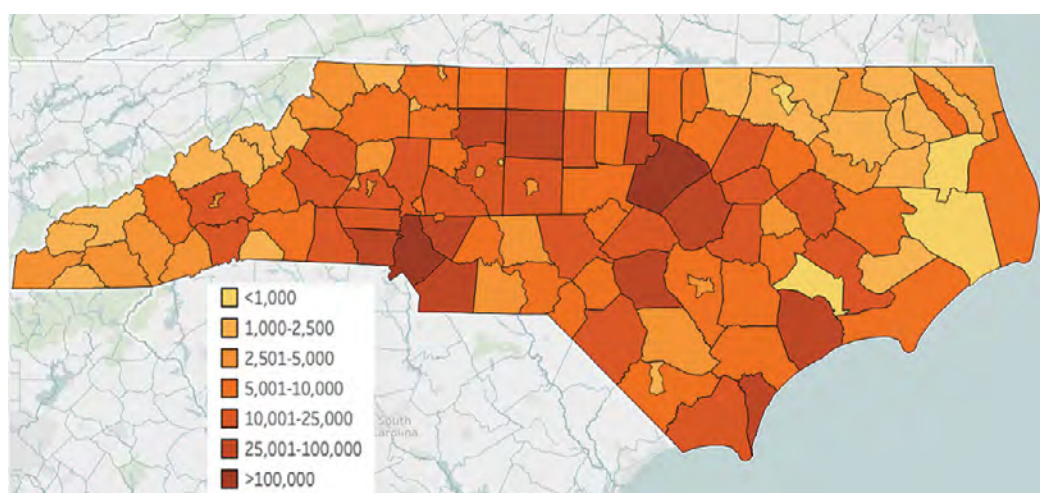
³⁷ These findings are largely drawn from the following four research reports: *Attracting, Preparing, Supporting, and Retaining Education Leaders in North Carolina* (Koehler, Peterson & Agnew, 2019); *Developing and Supporting North Carolina's Teachers* (Minnici, Beatson, Berg-Jacobson, & Ennis, 2019); *Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations* (Darling-Hammond et al., 2019); and *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities* (Oakes et al., 2019). Briefs summarizing these papers can be found in the appendices.

Findings

- ✦ **Finding #1:** North Carolina's low-wealth districts with small student populations have very limited staff and resources to provide critical services, including those that are essential for school improvement.

North Carolina has 100 county local education agencies and 15 additional LEAs in small cities within those counties. Many of these districts serve small numbers of students and therefore have limited resources. The 17 smallest LEAs by student population — Avery, Camden, Clay, Edenton-Chowan, Elkin City, Gates, Graham, Hyde, Jones, Mitchell, Mount Airy, Pamlico, Perquimans, Swain, Tyrrell, Warren, and Weldon City — each have fewer than 2,000 students and are therefore smaller than some of the state's largest high schools. Another 30 LEAs have fewer than 5,000 students (North Carolina Department of Public Instruction, 2018b). Exhibit 54 shows the sizes of the LEAs across the state.

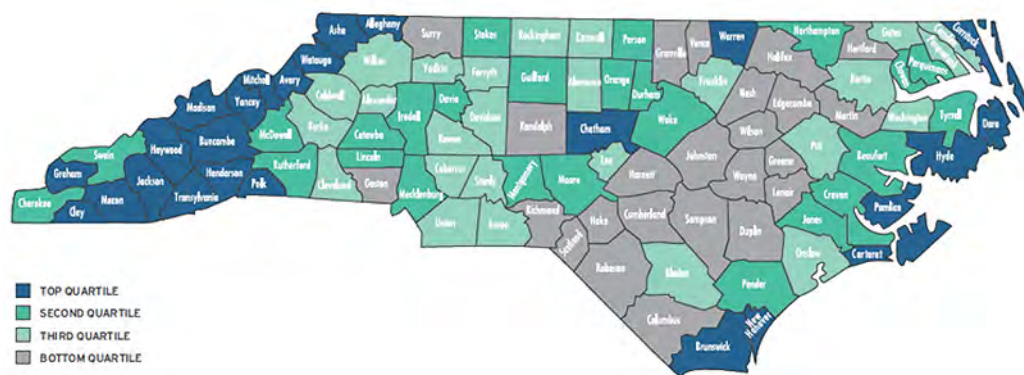
Exhibit 54. Size of student population in every LEA in North Carolina



Source: North Carolina Department of Public Instruction (2018b)

An annual local school finance study by the Public School Forum of North Carolina (2019) documents that many of the districts with relatively small student populations have a small real estate tax base per student, so even with a relatively high tax rate, these districts have limited funding available to support the schools. Further, the finance study shows that the gap in real estate value between wealthy and poor counties in North Carolina has increased dramatically over the past 20 years. Exhibit 55 shows the counties in North Carolina, color-coded by quartile of real estate wealth per average daily membership — a count of student enrollment — with the bottom quartile, shown in gray, composed of low-wealth rural districts.

Exhibit 55. North Carolina counties, by quartile of wealth per average daily membership



Source: Public School Forum of North Carolina (2018)

The low-wealth LEAs with small student populations have very limited staff and resources to provide critical services, including school improvement planning, data analysis, professional development for educators, technology infrastructure purchasing and supports, curriculum and instructional materials review and selection, supports for students with disabilities, and physical and psychological health supports for students.

❖ Finding #2: Some North Carolina schools are showing strong growth in student achievement for economically disadvantaged and other at-risk students, through the work of teams of talented and dedicated educators.

As part of the project research, we identified schools that largely serve economically disadvantaged and other at-risk students, had implemented effective and often innovative practices, and were demonstrating above-average success in meeting the needs and fostering the academic growth of their students. Through an iterative process that involved research reviews, practitioner interviews, and school site visits, the research team developed a framework that describes the success factors that enable these schools to provide their students with a sound basic education.³⁸ These success factors are:

1. A school culture in which all adults are committed to every student's success and all students have supportive relationships with adults and experience a comfortable and safe environment that supports their social, emotional, and academic growth.
2. A principal in every school who is well prepared to serve as both a change leader and an instructional leader, to recruit and retain highly qualified teachers, and to cultivate a successful teaching and learning environment for all students.
3. A sufficient staff of teachers and others who support students' learning, with all instructional staff well prepared in evidence-based instructional approaches, in content knowledge in the areas they

38 A brief summarizing this research, including examples from the site visits, can be found in Appendix I.

teach, and in strategies for successfully working with students with diverse backgrounds and learning differences.

4. Effective, evidence-based systems and practices for personalizing learning that account for variability in the pace, pathway, preferences, and needs of each student.
5. Curriculum resources and digital tools to support students' learning of the NC Standard Course of Study and more advanced topics.
6. Timely and ongoing formative assessments, aligned with the NCSCOS, used to inform and adapt instructional practices, consistently monitor student learning, and develop personalized learning pathways for each student.
7. Opportunities within and beyond the school walls for students to pursue their own interests and strengths and engage in experiential learning in which they apply their knowledge, collaborate, create, engage in authentic problem solving, and become self-directed lifelong learners.
8. Comprehensive staffing and supports for learning that go beyond classroom instruction to address social and emotional development, physical and psychological health, hunger, and adverse childhood experiences through partnerships with families, other organizations in the community, and other schools.
9. Effective, flexible use of funding, time, and space.

Our site visits to schools across North Carolina provided examples of inspired work by dedicated educators in making these success factors a reality. However, our visits also demonstrated that even with the strong leadership and dedicated teachers and other staff in these schools, the level of need of the students (e.g., students with food insecurity, housing instability, and other adverse childhood experiences), combined with the lack of adequate staffing (e.g., the shortage of nurses, counselors, social workers, and psychologists) and resources (e.g., textbooks and technology devices), made it impossible for these schools to provide all students with the supports they need to successfully obtain a sound basic education.

❖ **Finding #3: Research has shown that integrated, whole-child approaches to learning, such as a community-schools approach, can help improve struggling schools.**

Community schools are public schools that partner with families and community organizations to provide well-rounded educational opportunities and supports for students' school success. Like all good schools, community schools must be built on a foundation of powerful teaching that includes challenging academic content and supports students' mastery of 21st-century skills and competencies. What makes community schools unique is the combination of four key pillars that together create the conditions necessary for students to thrive. The pillars, as outlined by Maier, Daniel, Oakes, & Lam (2017), are:

- » Integrated student supports

- » Expanded and enriched learning time and opportunities
- » Active family and community engagement
- » Collaborative leadership and practices

Strong research supports the efficacy of integrated student supports, expanded and enriched learning time and opportunities, and family and community engagement as intervention and improvement strategies. Promising evidence supports the positive impact of the type of collaborative leadership and practices found in effective community schools. Taken as a whole, the evidence demonstrates that community schools can help mitigate out-of-school barriers and reduce gaps in both opportunity and achievement. Well-designed studies also suggest that schools providing integrated student supports and other community-school services promote positive outcomes for everyone by contributing to collective social and economic benefits.

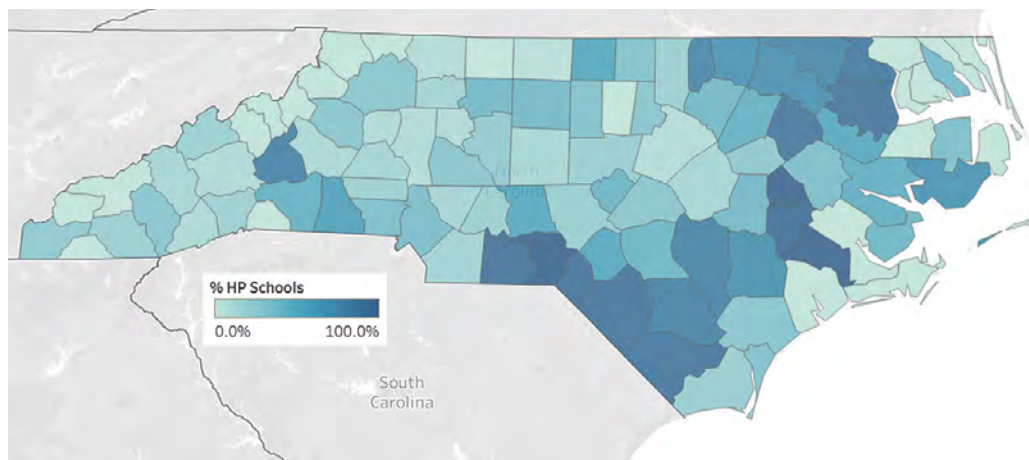
The state's Whole School, Whole Community, Whole Child Model (part of the Healthy Schools initiative within the NCDPI) is based on a model developed by the Association for Supervision and Curriculum Development and combines the eight elements of the Coordinated School Health approach from the Centers for Disease Control and Prevention with the whole-child framework. The focus of the approach is linking health to learning and child well-being. This is the only state-run program aimed at making schools hubs of supports for students and families experiencing adverse out-of-school conditions that impact school success. Although this model holds considerable promise, it is being implemented currently in only 11 counties. Significant supports for helping high-poverty schools implement this model successfully would further the state's effort to meet the *Leandro* requirements.³⁹

❖ **Finding #4: Low-wealth districts generally have poorer academic performance and face greater challenges than other districts, and they also lack the supports and resources they require for improving their schools.**

High-poverty schools are those in which at least 75% of the students are economically disadvantaged. North Carolina has 807 high-poverty traditional public schools (33% of public schools) and 36 high-poverty charter schools (21% of charter schools), located in urban, rural, and suburban communities and in every region in the state. These schools serve higher proportions than other schools of students with additional risk factors, including students of color, students who have disabilities, and English learners. Exhibit 56 shows the distribution of high-poverty schools by county, with the darker areas having higher concentrations of these schools.

39 More detail on the community schools model and the supports necessary for districts implementing this approach can be found in *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities* (Oakes et al., 2019).

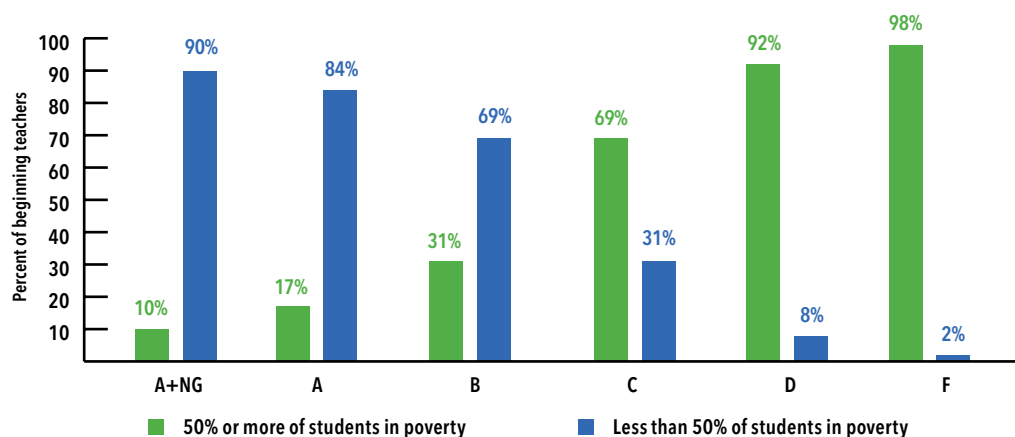
Exhibit 56. Percentage of each county's schools that are high-poverty schools



Source: Oakes et al. (2019)

A school's performance is highly correlated to its poverty level. As Exhibit 57 shows, 98% of the schools that receive a grade of F and 92% of the schools that receive a grade of D have school populations comprising 50% or more economically disadvantaged students.

Exhibit 57. School performance grades, by percentage of students in poverty



Source: Oakes et al. (2019)

Note: Schools that earn an A designation and do not have significant achievement and/or graduation gaps are designated as an A+NG school.

Economically disadvantaged students who attend schools with more advantaged peers do better than EDSs who attend schools where most students are poor, with the negative association of concentrated poverty growing larger from elementary to high school. That is, there is evidence of a strong negative relationship for at-risk students attending a high-poverty school and the attainment of a sound basic education as specified in *Leandro*.

High-poverty schools must address the many challenges students bring with them to school. These begin with a lack of early childhood and preschool programs in their communities and other factors that lead to many children entering kindergarten already behind their more advantaged peers in language, cognitive, social, and emotional development. Far too many children attending a high-poverty school experience adverse out-of-school conditions that place them at further risk, including food insecurity and hunger, limited or no access to health care, high rates of childhood trauma, and unstable and unpredictable housing. Further, many of these children have family responsibilities — such as caring for younger siblings or older relatives, serving as translators for their non-English-speaking parents, and contributing to the family income — that place burdens on them that may interfere with school attendance and work.

The differences between high-poverty schools and those serving more advantaged students are seen across the board. For instance, there are significant differences in the experiences and qualifications of educators who serve students in high-poverty schools and those in other schools. North Carolina’s high-poverty schools have fewer fully licensed teachers, fewer teachers with advanced degrees, and fewer teachers with National Board of Professional Teaching Standards certification. High-poverty schools have more lateral-entry teachers and more early-career teachers (teachers without certification and with fewer than three years of experience, respectively), who have been shown, on average, to be less effective in improving student achievement than teachers with more preparation and experience. These schools also have much higher rates of teacher turnover than other schools, and the constant influx of new teachers contributes to the challenges of improving these schools. In addition, the principals in high-poverty schools tend to be less-experienced school leaders, and the principal turnover rate is higher than that of other schools.

Students in high-poverty schools also have fewer opportunities for gifted programs, Advanced Placement courses, and other advanced learning opportunities while having much higher rates of disciplinary actions, such as suspensions and expulsions.

Educational success is the path out of poverty and to future opportunity. Yet this study found that low-wealth and under-resourced districts do not have the supports they require for ensuring that they provide their students with a sound basic education that prepares them for future success. These schools do not have access to the expertise, personnel, and resources required to meet their challenges. Without substantial supports provided by the state and by qualified school improvement experts, schools serving the highest numbers of economically disadvantaged children will continue to fall short in ensuring every child’s right to a sound basic education.

❖ **Finding #5: The state’s system of support for improving low-performing schools is insufficient to ensure all students obtain a sound basic education.**

Judge Manning was very clear about the need for state supports for school improvement and provided very explicit specifications for the state system of supports for school improvement. The NCDPI’s District and School Transformation model of state support was developed and expanded from 2012 through 2015 with Race to the Top funding. Evaluations have shown significant improvements in student performance in the North Carolina schools provided with intensive assistance for multiple years through the District and School Transformation model, with increased effects when supports were also provided to the district central office (Ashley, 2019; Henry,

2015). The model included leadership development and coaching for principals; intensive on-site professional development for teachers; support for the district and schools; community engagement; and attention to the whole child. These supports are all essential for the turnaround of low-performing schools.

However, with the decline in funding to the NCDPI, major decreases in its staffing, and reduction in the school improvement roles for which it takes responsibility, low-performing schools and districts are receiving significantly less support than they did up to 2015, and they don't have the resources or the expertise necessary to replace what the NCDPI used to provide. The study team gathered data about the state's school improvement structures and processes during interviews and focus groups. Principals reported that due to funding decreases and reductions in capacity and staff, the NCDPI no longer offers its District and School Transformation model to improve low-performing schools. Since Race to the Top ended, the transformational support from the NCDPI has been scaled back every year, and the coaching and professional development for leaders has ended. The current system of support for low-performing schools does not comply with the specifications previously defined by Judge Manning.

The NCDPI is establishing a regional support system, as recommended in an analysis of the NCDPI conducted by Ernst and Young in 2018. Regional case managers in eight regions of North Carolina will oversee the school improvement efforts of schools identified as the 5% lowest-performing schools in the state, as determined by the state accountability system, and of high schools that graduate less than two thirds of their students. These are called Comprehensive Support and Improvement schools. ESSA also requires that the state identify and provide targeted supports to any school that has a consistently underperforming subgroup of students, as determined by the state's assessment system. These are called Targeted Support and Improvement (TSI) schools.

Utilizing regional case managers in the eight educational regions in North Carolina to oversee support of CSI and TSI schools in their respective regions could be an effective organizational approach to providing the necessary supports. However, even if fully implemented, the current model does not call for the intensive, on-site, multiyear supports that have been found to be required and effective for improving low-performing schools. At this time and with current resources, the NCDPI does not have the capacity or a viable plan for how it will support the large number of designated CSI and TSI schools.

❖ **Finding #6: Regional collaboratives can be beneficial to districts, particularly small, low-wealth districts.**

North Carolina has a system of Regional Education Service Alliances (RESAs), one in each of the eight education regions of the state. RESAs used to receive state funding, but they no longer do; each is now funded with membership fees from the member districts, so they function as district collaboratives. Although the range of services differ across RESAs, throughout the network there are good examples of leadership development programs, teacher professional development programs, shared resources around technology implementation and supports, and other areas of collaboration.

Small, low-wealth districts that have limited internal capacity benefit the most from regional collaboratives that enable districts to share expertise, provide professional development programs, form professional communities

of practice, support initiatives such as the Restart schools, and reduce costs through collaborative purchasing and collaborative initiatives.

❖ **Finding #7: Evidence-based practices for school improvement that are already in place and are highly valued by North Carolina educators offer promise to the state’s struggling schools.**

Several approaches recommended and supported by the NCDPI are evidence-based practices that are highly valued by educators. These include the Multi-Tiered System of Supports (MTSS) for school improvement, which is already being used in every district; the Schoolwide Positive Behavioral Intervention System (SW-PBIS) for providing social, emotional, and behavior supports, which is being successfully implemented in some schools; and the NC Check-In formative assessments aligned to curriculum standards, which are quickly gaining widespread use.

Recommendations

Low-performing schools require substantial supports in order to address the needs of their students and enable those students to achieve a sound basic education. The findings document that the state has significantly reduced the supports it previously provided for school improvement and that the many small and low-wealth districts in the state lack the expertise and resources required to improve their schools. In order to address the *Leandro* requirements, as well as the ESSA requirements, it is critical that the state provide adequate school-improvement supports to the many schools needing them. The recommendations for addressing these findings are provided below.

⚙ **1. Rebuild the state’s capacity to fully support the improvement of its lowest-performing schools.**

The findings reviewed above point to the need to rebuild the state’s capacity to support the improvement of the lowest-performing schools, many of which are also high-poverty schools. To accomplish that, the state should do the following:

- » Rebuild the prior capacity of the NCDPI’s District and School Transformation division
- » Provide the new regional support structure being implemented by the NCDPI with additional capacity and more support, including from federal technical assistance centers and contracted evaluation-services providers
- Build the capacity of regional teams to provide support in all needed content, to provide instructional coaching, and to develop leaders for turnaround
- Utilize a vetted list of outside consultants to provide these additional support services — ensuring that the consultants understand the local context and needs and can collaboratively develop an effective and tailored approach for each individual school and community

- » Support the development of increased capacity in RESAs, providing them with technical assistance from school improvement experts to help them define their services and build staff capacity and structure for the provision of support services in their regions

• 2. Provide resources, opportunities, and supports for low-performing and high-poverty schools to address out-of-school barriers to learning, using a community-schools or other evidence-based approach.

Community schools are an evidence-based approach that can be used as a support strategy to improve low-performing schools under ESSA. North Carolina is well positioned to build on the considerable local interest in whole-child approaches and to integrate social supports into high-poverty schools by providing state funding, technical assistance, and a support infrastructure to implement high-quality community schools in high-poverty communities through the following actions:

- » Provide low-performing and high-poverty schools that are interested in implementing a community-schools approach with the support to do so, including:
 - Providing funding for a full-time community-schools director/coordinator to assess local needs and assets and to integrate social, academic, and health supports (including for mental health) into the school
 - Providing access to technical assistance (e.g., in partnership with an external nonprofit provider) to help plan and implement a community-schools approach
- » Expand the state’s current Whole School, Whole Community, Whole Child model (part of the Healthy Schools initiative within the NCDPI), which schools can use as a foundation for implementing community-schools approaches
- » Increase the capacity, resources, and roles of regional collaboratives of districts and schools

• 3. Provide statewide and/or regional support to help schools and districts select high-quality, standards-aligned, culturally responsive core curriculum resources and to prepare teachers to use those resources effectively.

Although North Carolina has a long history of the state being responsible for the review, selection, approval, and purchase of textbooks aligned to the state standards in core curriculum areas, the NCDPI may not continue to conduct the review and selection process, leaving it to the individual districts to select their own instructional materials. However, the review process is simply not manageable or cost-efficient for many of the small low-wealth districts on their own. In order to meet its responsibility to ensure that high-quality, standards-aligned core curriculum resources are available in every classroom, the state must do the following:

- » Recommit to and strengthen the state’s process for reviewing and adopting core curriculum resources by:

- Updating the process to include digital and blended resources and to provide districts with guidance about which resources, both commercial and open-source, would best help students obtain a sound basic education.
- Each time new curriculum resources are implemented, providing teachers with comprehensive professional development that is well designed to prepare them to use the curriculum resources effectively with the diverse range of students in their classrooms.

• 4. Extend the supports already available to schools to help them further implement the MTSS, the SW-PBIS, and NC Check-In approaches.

- » Through the provision of additional professional development, scale up the use of these effective, evidence-based interventions that are being used successfully by districts in their school improvement efforts.

Monitoring the State's Compliance



Critical Need: Convene an expert panel to assist the Court in monitoring state policies, plans, programs, and progress. This monitoring should ensure the state's ongoing compliance with the Leandro requirements.

This action plan, and the research reports that informed it, describe many findings documenting that North Carolina is far from meeting its constitutional obligation to provide every child in the state with an opportunity to receive a sound basic education. In fact, the challenges of meeting this obligation have increased since the original *Leandro* ruling in 1997 due to more rigorous curriculum standards that reflect the increased requirements for student to be college-, career-, and civic-life-ready; a changing student population, including an increased number of economically disadvantaged students; difficulties in recruiting and retaining a sufficient number of qualified teachers; and other factors. Furthermore, the challenges of providing every student with a sound basic education are likely to continue to increase in the coming years.

Bringing the state's education system into compliance with the *Leandro* requirements needs to be an ongoing effort, with a deep commitment from the state and all stakeholders; with wise and productive investments; with well-planned immediate, near-term, and long-term responses; and with ongoing efforts and continuous improvement over many years.

To ensure the state is effective in its efforts to comply with the *Leandro* requirements, the Court will need to continue to monitor the state's proposed actions, its implementation of those actions, and the results. Below are recommendations for how the Court can monitor the state's efforts.

Recommendations

1. The Court should appoint a panel of education experts to help the Court monitor the state's plans, initiatives, and progress in meeting the *Leandro* requirements.

The panel should include education experts in the areas of policy, accountability, leadership, teaching workforce, school improvement, equity, and whole-child supports, along with any other areas in which the Court seeks ongoing advice. The Court can request that all parties to the case recommend candidates to serve on this panel, with the Court selecting from among those recommendations.

The panel should review the state's plans and the progress data and reports submitted to the Court in order to inform the Court about the state's compliance efforts. The panel should also advise the Court on any additional information needed from the state in order to monitor compliance.

The panel may conduct surveys, focus groups, interviews, and school site visits in order to obtain information needed to inform the Court.

-
- 2. The Court should require annual reports of plans and progress on meeting the *Leandro* requirements from the North Carolina State Board of Education and the North Carolina Department of Public Instruction.
-

The state should provide the Court with its specific plans each year for meeting the *Leandro* requirements, with the plans including metrics that can be used to monitor annual progress toward complete compliance. The state should then provide summaries of all data relevant to monitoring progress on the state's compliance with the *Leandro* requirements, including those used in the school and district report cards; all reports compiled to meet federal, state, and State Board of Education requirements; education funding data; and any other information or analyses of data requested by the Court or by the expert panel.

Investment Overview and Sequenced Action Plan

The study findings clearly indicate that there is a need for the state to consider the use of its current resources and invest additional resources in order to provide every North Carolina child with a sound basic education. The recommended actions in the *Leandro* Action Plan are comprehensive and wide-ranging, touching on most of the major components and elements of North Carolina's pre-kindergarten through 12th grade education system, as well as on the components of the higher education system that prepare the education workforce. This section provides a recommended sequence for implementing the major recommended actions described in each Critical Need section of this report. The actions have been sequenced based on North Carolina's current capacity with a focus on strengthening the state's ability to sustain over time the improvements most critical to its education system. This sequenced action plan prioritizes making investments in the communities with the greatest needs first, including high-poverty schools.

Making the investments needed to reach the level of adequate funding specified will require the state and parties to *Leandro* to agree on the priorities for action in the short term and the longer term and to agree on the goals for education investment in the coming years. This sequenced action plan assumes continued increases in investment by the state over the next four budget cycles. Consistent with this assumption, education investments over the most recent biennium (fiscal year [FY] 2018–2019) and proposals for the next biennium (FY 2020–2021) provide increased investments by the state in North Carolina's early childhood education and K–12 education systems. During the FY 2018–2019 biennium, the state increased its investment in K–12 education by \$847 million and increased its investment in early childhood education by \$25.7 million (North Carolina Department of Public Instruction, 2019c; General Assembly of North Carolina, 2017). Further, if the state passes the funding increases currently being considered, it would invest an additional \$1.01 billion in K–12 education and \$15.6 million in early childhood education, depending on the final agreed-upon investments.⁴⁰ These investments represent notable progress toward the additional investment necessary in K–12 education and early childhood education.

40 North Carolina General Assembly. From various reports of the House and Senate Appropriations committees. <https://www.ncleg.gov/>.

In FY 2019, the state invested approximately \$8.6 billion in both the early childhood education⁴¹ and the K–12 education systems.⁴² The study’s analysis of needed resource investment over the next eight years suggests the following:

- » **K–12 education operating expenditures (short-term):** Invest \$3.2 billion (approximately \$395 million per year) over the next eight years that would provide intervention support to ensure students achieve at grade level. These investments would be withdrawn from the system after such student achievement levels are reached.
- » **K–12 education operating expenditures (ongoing):** Invest \$3.7 billion (approximately \$463 million per year) over the next eight years that would allow students to maintain grade-level growth.
- » **Early childhood education:** Invest an additional \$1.18 billion in programs such as NC Pre-K and Smart Start.
- » **State-level infrastructure:** Invest an additional \$15.5 million in programs such as teacher and principal development and the state’s system of support.

This overall investment recommendation is based on analyses conducted by the study team and represents the total resources necessary to meet the goal of a sound basic education for all, including existing and new investments.

It is important to note, though, that both where these investments are made and how much alignment there is to the Critical Needs and actions identified below must be considered in order to ensure the best opportunity for achieving intended improvements in student outcomes. For example, the Critical Needs and actions identified in this plan call for increased investments in school districts serving higher-need student populations (i.e., economically disadvantaged students, English learners, and exceptional children), as well as high-poverty communities. Investments already in place in North Carolina do not all align with the priority and level of investment identified by the Critical Need areas and actions below.

Whereas the investment period described above spans eight years, the sequencing provided below for the recommended actions to address each Critical Need described in this report is intended to assist the state in coming to agreement on which actions to prioritize for implementation over the next six years. It organizes the recommendations into a roadmap that should be refined, revisited, and adjusted over time. There is no expectation that the state will move through each phase in a set amount of time; however, it is important to note that the recommended time period of six years represents the timeframe in which the state should initiate the full set of recommended actions. The entities responsible for each action are indicated, as are the expected results of the cumulative actions in each Critical Need area.

41 The early childhood education spending figure of approximately \$292 million includes Child Development and Early Education fund codes for Smart Start (1162, 1271, 1381, 14A0) and NC Pre-K (1330).

42 The K–12 spending figure of \$8.2 billion is different from other publicly cited sources in North Carolina (e.g., Department of Public Instruction published figures), primarily because the cost function analysis excluded several spending categories that are not considered operating expenditures, including the following: debt service, construction expenditures, fund transfers, food services, judgments and settlements against the district, transportation services, tuition- or fee-funded programs (e.g., before- and after-school care, preschool), ancillary services, payments to other government units except indirect costs, and nonprogrammed charges.

The criteria used for determining the phase in which each action should begin are as follows:

- » **Phase I:** Highest-priority actions that require immediate attention, are fundamental to the success of other actions, build critical capacity to sustain improvement, and provide a significant return on investment. These actions should be initiated by 2020.
- » **Phase II:** Prioritized actions that build on or are dependent on Phase I actions, as well as new actions recommended for initiation.
- » **Phase III:** Actions that continue to build on Phase I and II actions, new actions recommended for initiation, and actions to sustain the investments and capacity put in place since 2020 to ensure a sound basic education for all children. These actions should be initiated by 2026.



Critical Need: Revise the state funding model to provide adequate, efficient, and equitable resources

Phase I	Phase II	Phase III
<p>Revise the state's school funding formula so that current and additional funding is distributed to students with the greatest need⁴³ by the following actions: add weights to specific position allotments to account for higher-need student groups; increase the cap on exceptional children funding; revise the central office allocation calculation; and base funding for limited English proficient students on the number of identified students in the district. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI</i></p> <p>Increase the investment in overall spending for public education incrementally over the next eight years to provide a sound basic education. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Increase flexibility by lifting restrictions on a number of critical allotments so that district leaders can make resource allocation decisions based on local needs.⁴⁴ <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p>	<p>Establish a mechanism for continually updating state funding amounts to account for annual inflation costs. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Factor into the school funding formula: regional differences in cost, adjustments for small schools/districts, and adjustments for low-wealth communities, revisiting the existing allotments for these latter two factors. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Revise the funding mechanism for charter schools so that distribution to charter schools occurs directly from the state rather than through public schools. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Combine and allow for the more flexible use of allotments, including position allotments and allotments that enable high-poverty schools to fund more teacher positions to support investments necessary for higher-need students. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Establish a biannual routine aligned to the state legislature's biennium for revisiting the investments made, their impact, and future actions toward meeting the tenets of <i>Leandro</i>. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Continue phasing in the increased investment in overall spending for public education. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p>	<p>Phase in a weighted student funding formula, collapsing all remaining allotments, aside from the position allotment, that accounts for local dollars that are being contributed to public education and ensures sustained, continued investment in K–12 education. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Revise the funding mechanism for charter schools so that distribution to charter schools occurs directly from the state rather than through public schools. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Combine and allow for the more flexible use of allotments, including position allotments and allotments that enable high-poverty schools to fund more teacher positions to support investments necessary for higher-need students. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Establish a biannual routine aligned to the state legislature's biennium for revisiting the investments made, their impact, and future actions toward meeting the tenets of <i>Leandro</i>. <i>Responsible: General Assembly, State Board of Education, NCDPI</i></p> <p>Continue phasing in the increased investment in overall spending for public education. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p>

Results:

- » Schools and districts have the flexibility to utilize resources to meet their most pressing local needs
- » Schools and districts are equitably funded, based on the differential costs of serving specific student populations
- » Schools and districts have the appropriate level of funding to provide for the needs of students they are serving

43 See Appendix K for proposed allotment and funding distribution changes to direct more funding to students of need and promote flexibility in the use of funds by adjusting the transfer provisions on the allotment system.

44 See Appendix K for proposed allotment and funding distribution changes to direct more funding to students of need and promote flexibility in the use of funds by adjusting the transfer provisions on the allotment system.



Critical Need: Provide a qualified, well-prepared, and diverse teaching staff in every school

Phase I	Phase II	Phase III
<p>Strategies to increase the quality, diversity, and adequacy of the incoming teacher supply</p> <p>Expand the role of the Professional Educator Preparation and Standards Commission to involve stakeholders in establishing high standards for North Carolina educators (e.g., responsive to 21st-century learning standards and supportive of a well-prepared, culturally competent workforce) and to make recommendations regarding all aspects of preparation, licensure, continuing education, and standards of conduct of public school educators.</p> <p><i>Responsible: General Assembly</i></p> <p>Review state teacher testing requirements to ensure that any testing barriers to entry that are unrelated to capacity to teach effectively are removed and that there are multiple ways to demonstrate competency.</p> <p><i>Responsible: State Board of Education, NCDPI, Professional Educator Preparation and Standards Commission</i></p> <p>Improve and expand the Teaching Fellows program by increasing the overall funding to support additional awards; increasing the number of partner institutions to include different regions of the state and minority-serving institutions; developing recruitment strategies that inform and attract candidates of color; reinstating the additional leadership training that Teaching Fellows previously received, including training on topics such as culturally responsive and trauma-informed practices and teaching students with disabilities; providing a shorter payback period (four years) for those who teach in any high-poverty school.*</p> <p><i>Responsible: Governor, General Assembly, State Board of Education, EPPs</i></p>	<p>Strategies to increase the quality, diversity, and adequacy of the incoming teacher supply</p> <p>Use licensing and accreditation rules and provide grants to educator preparation programs (EPPs) to improve clinical training and learning for standards-based, culturally responsive, trauma-informed teaching.</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI, EPPs</i></p> <p>Support high-quality teacher residency programs in high-need rural and urban districts through a state-matching grant program that leverages ESSA Title II funding.</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI, EPPs, LEAs</i></p> <p>Provide funding for Grow-Your-Own and 2+2 programs that help recruit teacher candidates in high-poverty communities.*</p> <p><i>Responsible: Governor, General Assembly</i></p> <p>Have the NCDPI and EPPs partner with LEAs to identify ways to be more intentional about recruiting and retaining a diverse teacher workforce and building the pipeline.</p> <p><i>Responsible: State Board of Education, NCDPI, RESAs, EPPs, LEAs</i></p> <p>Have the NCDPI provide guidance and support for LEA talent officers and human resources staff on successful practices to build and sustain a diverse workforce.</p> <p><i>Responsible: State Board of Education, NCDPI, RESAs, LEAs</i></p> <p>Strategies to support and retain new teachers</p> <p>Expand the New Teacher Support Program to all first-year teachers and incentivize National Board–certified teachers to serve as mentors to those new teachers.*</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p>	<p>Strategies to support and retain new teachers</p> <p>Expand the New Teacher Support Program to all second- and third-year teachers.*⁴⁵</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI, EPPs, LEAs</i></p> <p>Strategies to develop and support all teachers</p> <p>Improve teaching and learning conditions, including through principal preparation; professional learning, collaboration, and leadership opportunities; and whole-child supports that enable teachers to better focus on instruction.</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI, RESAs</i></p> <p>Provide teachers with the required time and support to engage in high-quality professional learning opportunities that align with the needs of individual teachers, teacher teams, and schools.</p> <p><i>Responsible: LEAs</i></p> <p>Create a professional learning block grant for low-wealth districts and district collaboratives for the purpose of teacher professional development addressing high-need students.</p> <p><i>Responsible: General Assembly, State Board of Education, NCDPI</i></p>

⁴⁵ The study team conducted further investigation into estimated costs and assumptions for a set of the major action items. Estimated costs and/or assumptions for actions marked with an asterisk (*) are included in Appendix J.

Phase I

Set data-informed goals to increase the racial-ethnic diversity of the teacher workforce and annually report on progress.

Responsible: State Board of Education, NCDPI, EPPs, LEAs

Strategies to support and retain new teachers

Improve the quality of the New Teacher Support Program by ensuring that all mentors are well trained, teach in the same field as mentees, and have release time to coach beginning teachers in their classrooms as well as support their instructional planning. Focus this effort on the needs of new teachers in high-poverty districts.*

Responsible: State Board of Education, NCDPI, RESAs, EPPs

Require and support greater levels of mentor support and training for teachers of record who are not yet fully licensed.*

Responsible: State Board of Education, NCDPI, RESAs

Strategies to develop and support all teachers

Expand the role of the Professional Educator Preparation and Standards Commission to include developing recommendations to ensure that all educators have access to high-quality professional learning opportunities relevant to their needs.

Responsible: General Assembly, Professional Educator Preparation and Standards Commission

Strategies to recruit and retain all teachers

Increase teacher salaries to make them competitive with teacher salaries in other states in the region and with other career options that require similar levels of preparation, certification, and levels of experience.

Responsible: Governor, General Assembly

Increase the funding for teacher allotments for low-wealth districts to enable them to offer teacher salary supplements that are competitive with those of other districts.

Responsible: Governor, General Assembly

Phase II

Strategies to develop and support all teachers

Implement Learning Forward's Standards for Professional Learning to serve as guidance for the design and assessment of professional learning opportunities and to inform continuous improvement and future funding decisions.

Responsible: State Board of Education, NCDPI, RESAs, North Carolina Center for the Advancement of Teaching, LEAs

Invest in building the capacity and infrastructure to support more personalized and job-embedded professional learning opportunities for teachers by coordinating with various entities across the state, such as colleges and universities and regional technical assistance providers.

Responsible: State Board, NCDPI, RESAs, other technical assistance providers, IHEs, LEAs

Strategies to recruit and retain all teachers

Add financial incentives for the recruitment and retention of qualified teachers in high-poverty schools, prioritizing the use of National Board–certified teachers to serve as mentors and instructional leaders in high-poverty schools.

Responsible: General Assembly

Phase III

Phase I	Phase II	Phase III
<p>Strategies to extend the reach of effective teachers</p> <p>Expand the Teacher Compensation Models and Advanced Teaching Roles pilot program to allow all districts to apply for one-time startup funds; create dedicated state funding; and encourage LEAs to blend/braid existing funds to help launch and sustain advanced teaching roles through this and other evidence-based models. <i>Responsible: Governor, General Assembly</i></p> <p>Establish a Transition to Advanced Teaching Roles program that leads cohorts of districts and schools through a common design process.* <i>Responsible: State Board of Education, NCDPI</i></p> <p>Plan ongoing evaluation and ongoing continuous improvement efforts to better understand the outcomes from advanced teaching roles. <i>Responsible: State Board of Education, NCDPI</i></p>		

Results:

- » Increased number (5,000 annually) of in-state trained and credentialed teachers
- » Increase in teachers of color in the teacher workforce to better reflect the student population (from 20% to 40%)
- » Comprehensive mentoring and induction support provided for all first-, second-, and third-year teachers (approximately 15,500)
- » Competitive teaching salaries in all North Carolina LEAs
- » Teacher attrition statewide at 7% or lower
- » Increased number (annually 1,500) of Teaching Fellows awards
- » Increase in experienced, effective, and certified teachers in high-poverty schools
- » Improved teacher retention in high-poverty schools
- » Improved capacity in districts and schools to provide high-quality, job-embedded professional learning
- » Increased student achievement



Critical Need: Provide a qualified and well-prepared principal in every school

Phase I	Phase II	Phase III
<p>Update the state's principal preparation and principal licensure requirements to align to the National Education Leadership Preparation Standards and require principal preparation programs (PPPs) to demonstrate that they are preparing candidates to meet these standards. <i>Responsible: State Board of Education, NCDPI, PPPs</i></p> <p>Expand the number of fellowships available through the Principal Fellows program and actively recruit diverse candidates to apply to be Principal Fellows.* <i>Responsible: General Assembly, PPPs</i></p> <p>Expand the Transforming Principal Preparation Program while maintaining high standards for participating programs and the paid internship requirement; expand the TP3 focus on preparing transformation leaders of low-performing, high-poverty schools; set the goal of having each school district partner with at least one of the TP3-funded programs; recruit diverse candidates to the TP3 programs; and establish TP3-funded programs in minority-serving universities.* <i>Responsible: General Assembly, PPPs</i></p> <p>Revise the principal salary structure and improve working conditions to make the principalship more attractive to qualified educators, especially those in high-need schools. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Provide incentives for school leaders to work in high-need schools, such as a meaningful supplement for principals who take a position to turn around a persistently failing school and protection against principals having a salary reduction if they go to work in a low-performing school. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p>	<p>Expand, scale, and/or replicate statewide the successful professional learning opportunities for current principals and assistant principals.* <i>Responsible: General Assembly, NCDPI, North Carolina Principals and Assistant Principals Association, North Carolina School Superintendents Association, other technical assistance providers, LEAs</i></p> <p>Create a statewide mentorship program for beginning assistant principals and principals so that all beginning school administrators are provided with a coach. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, NCPAPA, LEAs</i></p> <p>Provide district leaders and principals with more autonomy to allocate resources, including autonomy to make decisions on funding and personnel assignments to address their school's needs. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Increase the number of nurses, counselors, social workers, and psychologists available in schools so that principals have access to professionals who are trained to address students' physical and mental health and out-of-school issues that impede their learning. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Ensure, through preparation and professional development, that principals and district leaders are prepared to create collaborative learning environments for teachers, which can enhance effectiveness and reduce turnover in the teaching force. <i>Responsible: State Board of Education, NCDPI, technical assistance providers identified by the NCDPI, RESAs, NCPAPA, LEAs</i></p>	<p>Scale up the use of staffing models, such as Advanced Staffing and Opportunity Culture, to expand instructional leadership in schools serving economically disadvantaged students.* <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p>

Phase I	Phase II	Phase III
<p>Reward school leaders for their school's progress on indicators that go beyond student achievement on standardized assessments.</p> <p><i>Responsible: State Board of Education, NCDPI, LEAs</i></p>		

Results:

- » Stronger pipeline of well-prepared school leaders
- » Principal preparation programs aligned to national standards
- » Schools with the support personnel needed to address students' physical and mental health and other issues that impede learning
- » Greater autonomy for principals to make resource decisions to address school needs
- » Increased principal retention
- » More highly qualified principals in low-performing and high-poverty schools
- » Effective state system for principal induction and professional development
- » Enhanced working conditions
- » Improved instruction and learning



Critical Need: Provide all at-risk students with the opportunity to attend high-quality early childhood programs

Phase I	Phase II	Phase III
<p>Set a target for reaching universal full-day, full-year Pre-K delivery by 2026. <i>Responsible: Governor, General Assembly</i></p> <p>Expand the NC Pre-K program to provide high-quality, full-day, full-year services to all at-risk 4-year-olds by increasing reimbursement rates to cover higher-quality services and to account for expanded full-day, full-year programming.* <i>Responsible: Governor, General Assembly, Department of Health and Human Services (DHHS), county/region NC Pre-K committees</i></p> <p>Fund Smart Start to enable communities to use the flexible funds to increase quality, access, and support for at-risk children and families.* <i>Responsible: Governor, General Assembly, Smart Start</i></p> <p>Establish a data collection process to identify the children and families in need of services and use data collected to determine the number of early childhood teachers and staff necessary to provide high-quality early childhood education services to all eligible 4-year-olds. <i>Responsible: General Assembly, DHHS, county/region NC Pre-K committees</i></p> <p>Increase the volume and quality of the early childhood educator pipeline to meet need by linking compensation packages to public school schedules; expanding the WAGE\$ Salary Supplement Program and the Infant Toddler Educator AWARDS Program to support salary schedule growth; using recruitment efforts such as scholarships, loan forgiveness, and residency programs; and implementing an accessible statewide system of professional development.* <i>Responsible: Governor, General Assembly, DHHS</i></p>	<p>Require local NC Pre-K committees to include in their annual implementation plans a plan to increase the number of slots each year and goals and strategies for family outreach. <i>Responsible: DHHS, county/region NC Pre-K committees</i></p> <p>Align elementary school settings to the needs of young children in grades K–3 to support their transition to school by expanding principal professional development in early childhood; providing adequate funds for teaching assistants and specialized personnel support in line with nationally recommended ratios; and utilizing formative assessments across early education settings and grades K–3 to guide instructional practices.⁴⁶ <i>Responsible: General Assembly, NCDPI, LEAs</i></p>	<p>Continue to support early childhood educators through a statewide system of high-quality ongoing professional learning that inducts new early childhood teachers and supports ongoing learning in critical areas of practice. <i>Responsible: DHHS</i></p> <p>Provide additional funding for transportation for children and families to get to NC Pre-K sites in both public and private settings.⁴⁷ <i>Responsible: Governor, General Assembly, DHHS, Smart Start</i></p>

⁴⁶ This action is appropriately listed under this critical need area; but note that it is included in the sum of additional investments for K–12 education and not early childhood education.

⁴⁷ The costs associated with this action are subsumed under the costs for the NC Pre-K action and early childhood educator compensation actions in Phase I.

Results:

- » Communities expand high-quality early education options accessible to low-income families
- » High-quality, full-day Pre-K available to all high-need 4-year-olds in high-poverty communities and low-income families
- » Early childhood educators adequately compensated and supported in their growth in order to sustain improvements to the quality of the educator workforce
- » Increase in number of students entering kindergarten ready for learning
- » K–3 settings equipped to address young children’s social, emotional, and academic needs
- » Transportation to and from Pre-K and after-school care for working families and families without transportation, addressing barriers to attendance
- » Increase in numbers of students who are performing at grade level by third grade




Critical Need: Direct resources, opportunities, and initiatives to economically disadvantaged students

Phase I	Phase II	Phase III
<p>Provide resources, supports, and flexibilities to enable low-performing and high-poverty schools to address out-of-school barriers to learning, through community-schools and other evidence-based approaches that meet their specific needs. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Provide funding for voluntary after-school and summer programs to expand learning time and help students in high-poverty schools keep pace with more advantaged students. <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Provide whole-child supports through positional funding that increases the number of specialized school support personnel to meet the national guidelines, initially prioritizing high-poverty schools.* <i>Responsible: Governor, General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Set and make public an ambitious five-year goal of reducing to less than 5% the number of uncertified teachers and leaders in high-poverty schools and reducing to less than 10% the number of teachers and leaders in high-poverty schools with fewer than three years of experience. <i>Responsible: Governor, State Board of Education, NCDPI, EPPs, alternative teacher preparation programs, LEAs</i></p>	<p>Include opportunity-to-learn indicators in the state’s accountability system to better gauge the ability of high-poverty schools and other schools serving disadvantaged students to contribute to student success. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Extend existing food programs to provide free breakfast and lunch to all students in high-poverty schools by using the federal Community Eligibility Provision funding and state funding. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p> <p>Guarantee that all high-poverty middle and high schools provide the full range of courses and additional supports to ensure all students have the opportunity to graduate college and career ready. <i>Responsible: State Board of Education, NCDPI, institutions of higher education, LEAs</i></p> <p>Remove barriers to economically disadvantaged students taking full advantage of the Career and College Promise program, including by providing funding for textbooks and other fees as well as transportation. <i>Responsible: State Board of Education, NCDPI, IHEs, LEAs</i></p> <p>Revise the funding approach for the North Carolina Virtual Public School to remove barriers that may prevent students in low-wealth districts from participating. <i>Responsible: General Assembly</i></p>	<p>Provide expanded instructional time, such as a longer day and school year and/or smaller class sizes for elementary and middle school students in high-poverty schools to help them keep pace with more-advantaged students. <i>Responsible: General Assembly, State Board of Education, NCDPI, LEAs</i></p>

Results:

- » Economically disadvantaged students provided with the comprehensive, whole-child supports that are essential conditions for learning
- » Students in high-poverty schools taught by fully certified, experienced teachers
- » Instructional supports and opportunities in place that provide economically disadvantaged students (and all students in schools with high concentrations of such students) with access to career- and college-readiness opportunities that are comparable with students in more advantaged circumstances

- 
-
- » Increased instructional time and out-of-school learning time in high-poverty schools
 - » Free breakfast and lunch provided to all students in high-poverty schools
 - » Better measures by the state's accountability system of the contributions to learning made by schools serving disadvantaged students, providing information that can be used to inform continuous improvement



Critical Need: Revise the student assessment and school accountability systems

Phase I	Phase II	Phase III
<p>Assessment System Revise the student assessment system to become more balanced and student-centered by expanding the use of the NC Check-Ins and providing guidance to LEAs to streamline the number of assessments at the local level, mitigating the use of multiple assessments for similar purposes. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Clarify alignment between the assessment system and the state's theory of action. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Update state assessment to include items that measure a deeper and broader understanding of students' knowledge, skills, and abilities. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Accountability System Revise achievement levels to align with the court's standard of a sound basic education, with a singular definition of proficiency that aligns with grade-level and college- and career-readiness expectations and that provides stakeholders with consistent and actionable measures of student progress and proficiency. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Adopt a framework for accountability with a comprehensive set of measures that would indicate progress toward meeting the <i>Leandro</i> requirements and is inclusive of the reporting requirements under ESSA. <i>Responsible: State Board of Education, NCDPI</i></p>	<p>Assessment System Improve coherence among curriculum, instruction, and assessment by promoting the use of high-quality, aligned instructional materials and bolstering professional development efforts and state-provided resources related to standards-based instruction and standards implementation. <i>Responsible: State Board of Education, NCDPI, LEAs</i></p> <p>Accountability System Amend the NC Dashboard to provide data on state, district, and school performance and growth on a comprehensive set of measures that would indicate progress toward meeting the <i>Leandro</i> requirements and is inclusive of the reporting requirements under ESSA. <i>Responsible: State Board of Education, NCDPI</i></p> <p>Use data from the accountability system at the state, district, and school level to guide planning and budget decisions and to assess school progress and improvement efforts. <i>Responsible: State Board of Education, NCDPI, LEAs</i></p> <p>Develop a process for identifying schools for support and improvement that uses a set of decision rules to meet the requirements under ESSA and <i>Leandro</i> (e.g., identify schools with the lowest performance on the greatest number of indicators or identify schools with the greatest number of low-performing indicators, but give certain academic indicators greater weight). <i>Responsible: State Board of Education, NCDPI</i></p> <p>Use the data provided in the NC Dashboard to identify the appropriate evidence-based interventions and supports. <i>Responsible: State Board of Education, NCDPI, LEAs</i></p>	<p>Assessment System Monitor the state's assessment system for alignment to standards and use data to make changes as needed. <i>Responsible: State Board of Education, NCDPI</i></p>

Results:

- » Streamlined student assessment system that provides ongoing and actionable information for students, families, and teachers
- » Proficiency level aligned with grade-level expectations and with the definition of a sound basic education
- » Actionable data on state, district, and school performance and growth provided on a comprehensive set of measures by the NC Dashboard
- » Measurable progress toward the *Leandro* requirements
- » Accountability system structured to reward school growth in performance on an indicator in addition to status on select indicators
- » LEAs recognized for positive student outcomes across multiple measures



Critical Need: Build an effective regional and statewide system of support for the improvement of low-performing and high-poverty schools

Phase I	Phase II	Phase III
<p>Rebuild the state's capacity to fully support the improvement of low-performing schools by defining the state's overall approach to driving improvement in student outcomes; rebuilding the staff capacity within the NCDPI to lead district and school transformation; defining regional structures of support; and providing resources to build the capacity of regional collaboratives or teams, RESAs, and other vetted providers to support LEAs in their regions.* <i>Responsible: State Board of Education, NCDPI, RESAs</i></p> <p>Provide resources, opportunities, and supports for the state's low-performing and high-poverty schools to address out-of-school barriers to learning by adopting a community-schools approach with a full-time community-schools coordinator or other evidence-based approach to providing social, academic, and health supports for students.* <i>Responsible: State Board of Education, NCDPI, RESAs, LEAs</i></p> <p>Identify approved school improvement providers to assist LEAs and schools. <i>Responsible: NCDPI, RESAs, other technical assistance providers</i></p> <p>Create a statewide repository of evidence-based school improvement practices. <i>Responsible: NCDPI</i></p>	<p>Implement an effective regional system of support for LEAs, low-performing schools, and high-poverty schools that is driven by outcomes for all students by providing technical assistance in school improvement; leadership coaching; development of instructional coaches; adoption and scale-up of evidence-based practices, including early literacy programs, whole-child supports, training for MTSS and SW-PBIS; and formative assessment using NC Check-Ins. <i>Responsible: State Board of Education, NCDPI, RESAs, other state technical assistance providers, LEAs, schools</i></p> <p>Provide statewide and/or regional support to help all schools and districts select core curriculum resources that are high quality, standards aligned, and culturally responsive and to prepare teachers to use those resources effectively and with fidelity. <i>Responsible: State Board of Education, NCDPI, RESAs, other state technical assistance providers, LEAs, schools</i></p> <p>Provide RESAs and/or other regional collaboratives with technical assistance support to define school improvement services and build staff capacity and structure for the provision of services in the regions. <i>Responsible: State Board of Education, NCDPI, RESAs, other state technical assistance providers, LEAs, schools</i></p>	<p>Scale up the regional system of support so that every low-performing school has access to and is receiving technical assistance aligned to its school improvement plan and its goals for closing achievement gaps and so that all schools and LEAs have access to high-quality professional development. <i>Responsible: State Board of Education, NCDPI, RESAs, other state technical assistance providers, schools, LEAs</i></p> <p>Conduct ongoing progress monitoring and a statewide evaluation of the state and regional system of support to measure impact and inform continuous improvement. <i>Responsible: State Board of Education, NCDPI, RESAs</i></p>

Results:

- » Articulated state model for school improvement
- » NCDPI structured to provide leadership and support for school turnaround
- » Regional entities funded to support school improvement
- » State-vetted providers available to LEAs for technical assistance
- » Leadership and instructional coaching for LEAs and schools
- » LEAs and schools supported to adopt evidence-based practices
- » Data to measure progress on school improvement collected and used by state
- » Improvement in student outcomes in low-performing and high-poverty schools



Critical Need: Convene an expert panel to assist the Court in monitoring state policies, plans, programs, and progress

Phase I	Phase II	Phase III
Appoint a panel of education experts to help the Court monitor the state's plans, initiatives, and progress in meeting the <i>Leandro</i> requirements. <i>Responsible: State Board of Education, Leandro Counsel of Record, Supreme Court of North Carolina</i>	Report on and file annual reports of plans and progress on meeting the <i>Leandro</i> requirements. <i>Responsible: Appointed Panel, State Board of Education, NCDPI, Leandro Counsel of Record, Supreme Court of North Carolina</i>	Report on and file annual reports of plans and progress on meeting the <i>Leandro</i> requirements. Update the <i>Leandro</i> Action Plan, as needed. <i>Responsible: Appointed Panel, State Board of Education, NCDPI, Leandro Counsel of Record, Supreme Court of North Carolina</i>

Results:

- » Semiannual monitoring of progress toward meeting the *Leandro* requirements
- » Annual public report on state's progress toward key benchmarks of performance on providing students with a sound basic education

K–12, Early Childhood Education and State-level Infrastructure: Future Investment Overview

The tables below present sequenced investments over the next four biennia, or eight years, inclusive of the most immediate biennium (FY 2020–2021), describing investments in K–12 education, early childhood education, and state-level supports. Based on evidence from the study, building capacity to effectively use these new resources suggests that this will likely take between three and seven years, depending on the depth and range of change. As noted earlier, the state increased its investment in both K–12 and early childhood education by approximately \$873 million over the last biennium (FY 2018–2019). Current proposals being discussed by the General Assembly would provide an additional \$1.1 billion over the next biennium (FY 2020–2021). This is notable progress and is in alignment with the *Leandro* Action Plan recommendations for additional investments.

The research from this study shows that practitioners need an adequate amount of time to plan and build their capacity to ensure the most effective and efficient use of any additional investment in the public education system. The study also indicates that to improve most rapidly over time, it is ideal to concentrate on using the increased funding to focus on a few priorities systemwide, rather than focusing on the individual school or school district level. The sections below offer further information about over what period of time and on what items the state may direct these additional investments in alignment with the recommendations and actions of this report. Note that the cost out of some of the recommendations and actions are presented below. This is for a few reasons. First, when the study team had incorporated cost information into the analysis, this information is presented below. Second, the study team was able to gather historical cost data or other publicly available sources of data, which are also incorporated below. Third, many of the items noted below require the decision-making of the state that the study team is not able to ascertain at the time that this study was published. Therefore, the study team does highly suggest that once recommendations and actions are chosen for implementation that a team work on costing out those items specifically for incorporation into future investments in early childhood education, public school district operational budgets, and/or state-level supports.

Recommended Short-term Sequenced Investments in North Carolina K–12 Public Schools and District Operation Budgets

As discussed in detail earlier, that in order to meet the *Leandro* requirements and close gaps between low-performing students and their higher-achieving peers, the modeling suggests that the state needs to invest \$3.16 billion over the next eight years. Exhibit 58 below provides a table of the actions that would fall into these short-term investments and, where available, cost estimates. As noted earlier in the Finance and Resource Allocation section, the modeling looked at total recommended investment needed to reach academic proficiency rates necessary for *Leandro* compliance. When cost information was available for specific recommendations or actions, those costs were included below. Those items that the state intends to move forward should be costed out.

Exhibit 58. Recommended short-term sequenced investments and cost estimates in North Carolina K–12 public schools and district operation budgets

Critical Need	Description of action	Estimated amount (if available)
Funding, Phase I	Revise the state’s school funding formula so that current and additional funding is distributed to students with the greatest need ⁴⁸ by the following actions: add weights to specific position allotments to account for higher-need student groups; increase the cap on exceptional children funding; revise the central office allocation calculation; and base funding for English learners on the number of identified students in the district.	\$857 million directed to high-poverty schools over eight years (other subsequent actions below may be implemented with this investment)
Teachers, Phase I	Require and support greater levels of mentor support and training for teachers of record who are not yet fully licensed.	
Teachers, Phase I	Expand the Teacher Compensation Models and Advanced Teaching Roles Pilot Program to allow all districts to apply for one-time startup funds; create dedicated state funding; and encourage LEAs to blend/ braid existing funds to help launch and sustain advanced teaching roles through this and other evidence-based models.	Ramp up to \$80 million per year for advanced teaching roles pilot program
Teachers, Phase II	Provide funding for Grow Your Own and 2+2 programs that help recruit teacher candidates in high-poverty communities.	
Teachers, Phase II	Add financial incentives for the recruitment and retention of qualified teachers in high-poverty schools, prioritizing the use of National Board–certified teachers to serve as mentors and instructional leaders in high-poverty schools.	
Teachers, Phase II	Create a professional learning block grant for low-wealth districts and district collaboratives for the purpose of teacher professional development addressing high-need students.	
Principals, Phase III	Scale up the use of staffing models, such as Advanced Staffing and Opportunity Culture, to expand instructional leadership in schools serving economically disadvantaged students.	
HPS, Phase I	Provide resources, supports, and flexibilities to enable low-performing and high-poverty schools to address out-of-school barriers to learning, through community-schools and other evidence-based approaches that meet their specific needs.	
HPS, Phase I	Provide funding for voluntary after-school and summer programs to expand learning time and help students in high-poverty schools keep pace with more advantaged students.	

48 See Appendix K for proposed allotment and funding distribution changes to direct more funding to students of need and promote flexibility in the use of funds by adjusting the transfer provisions on the allotment system.

Critical Need	Description of action	Estimated amount (if available)
HPS, Phase I	Provide whole-child supports through positional funding that increases the number of specialized school support personnel to meet the national guidelines, initially prioritizing high-poverty schools.	Ramp up to \$700 million per year directed to social and behavioral supports such as counselors and social workers
HPS, Phase II	Set and make public an ambitious five-year goal of reducing to less than 5% the number of uncertified teachers and leaders in high-poverty schools and reducing to less than 10% the number of teachers and leaders in high-poverty schools with fewer than three years of experience.	
HPS, Phase II	Extend existing food programs to provide free breakfast and lunch to all students in high-poverty schools by using the federal Community Eligibility Provision funding and state funding.	
HPS, Phase II	Guarantee that all high-poverty middle and high schools provide the full range of courses and additional supports to ensure all students have the opportunity to graduate college- and career-ready.	
HPS, Phase II	Remove barriers to economically disadvantaged students taking full advantage of the Career and College Promise program, including by providing funding for textbooks and fees as well as transportation.	
HPS, Phase III	<p>Revise the funding approach for the North Carolina Virtual Public School to remove barriers that may prevent students in low-wealth districts from participating.</p> <p>Provide expanded instructional time, such as a longer day and school year, and/or smaller class sizes for elementary and middle school students in high-poverty schools to help them keep pace with more advantaged students.</p>	
System of Support, Phase I	Provide resources, opportunities, and supports for the state's low-performing and high-poverty schools to address out-of-school barriers to learning by adopting a community-schools approach with a full-time community-schools coordinator or other evidence-based approach to providing social, academic, and health supports for students.	Ramp up to \$50 million per year for full-time community schools' coordinators at 300 schools

Exhibit 59 shows how the recommended, short-term sequenced investment in North Carolina K–12 public schools and districts would occur over the next eight years. This scenario assumes several waves of investment and presents the amount of investment annually and cumulatively.

Exhibit 59. Recommended short-term sequenced investment in North Carolina K–12 public schools and district operation budgets⁴⁹

Biennium	Annual amount (\$ millions) ⁵⁰	Cumulative amount (\$ millions)	Description of actions funded by these investments
FY2020–2021	\$390	\$780	Phase I: Highest-priority actions that require immediate attention, are fundamental to the success of other actions, and build critical capacity to sustain improvement
FY2022–2023	\$600	\$1,980	Phase II: Prioritized actions that build on Phase I commitments, depend on capacity built by Phase I actions, and/or serve to initiate additional capacity-building efforts critical to success of future efforts
FY2024–2025	\$390	\$2,760	Phase III: Actions that continue to build on Phase I and II commitments and are sequenced to further build capacity for successful implementation and sustainability of efforts
FY2025–2026	\$200	\$3,160	
FY2027–2028	\$0	\$0	Short-term investments removed from operational budgets

Recommended Ongoing Sequenced Investments in North Carolina K–12 Public Schools and District Operation Budgets

As noted previously, that the *Leandro* requirements and close gaps between low-performing students and their higher-achieving peers, the modeling of cost suggests that the state needs to invest \$3.7 billion in ongoing funding. Exhibit 60 below provides a table of the actions that would fall into these short-term investments and, when available, cost estimates. As noted earlier in the Finance and Resource Allocation section, the modeling looked at total recommended investment needed to reach academic proficiency rates necessary for *Leandro* compliance. When cost information was available for specific recommendations or actions, those costs were included below. Those items that the state intends to move forward should be costed out.

⁴⁹ These figures identify the amount necessary to directly invest in public schools and districts and do not include any spending associated with state-level activities.

⁵⁰ These year-by-year investments do not account for annual adjustments for inflation.

Exhibit 60. Recommended ongoing sequenced investments and cost estimates in North Carolina K–12 public schools and district operation budgets

Critical Need	Description of action	Estimated amount (if available)
Funding, Phase I	Revise the state’s school funding formula so that current and additional funding is distributed to students with the greatest need ⁵¹ by the following actions: add weights to specific position allotments to account for higher-need student groups; increase the cap on exceptional children funding; revise the central office allocation calculation; and base funding for English learners on the number of identified students in the district.	\$1.2 billion directed to high-poverty schools over eight years (other subsequent actions below may be implemented with this investment)
Funding, Phase II	Factor into the school funding formula regional differences in cost, adjustments for small schools/districts, and adjustments for low-wealth communities.	\$342 million directed to schools to account for economies of scale
Teachers, Phase I	Improve the quality of the New Teacher Support Program by ensuring that all mentors are well trained, teach in the same field as mentees, and have release time to coach beginning teachers in their classrooms as well as support their instructional planning. Focus this effort on the needs of new teachers in high-poverty districts.	
Teachers, Phase I	Increase teacher salaries to make them competitive with teacher salaries in other states in the region and with other career options that require similar levels of preparation, certification, and levels of experience.	
Teachers, Phase I	Increase the funding for teacher allotments for low-wealth districts to enable them to offer teacher salary supplements that are competitive with those of other districts.	
Teachers, Phase II	Support high-quality teacher residency programs in high-need rural and urban districts through a state-matching grant program that leverages ESSA Title II funding.	
Teachers, Phase II	Expand the New Teacher Support Program to all first-year teachers and incentivize National Board–certified teachers to serve as mentors to those new teachers.	\$9 million per year for new teacher support for first-year teachers
Teachers, Phase III	Expand the New Teacher Support Program to all second- and third-year teachers.	\$25 million per year for new teacher support for second- and third-year teachers
Teachers, Phase III	Improve teaching and learning conditions, including through principal preparation; professional learning, collaboration, and leadership opportunities; and whole-child supports that enable teachers to better focus on instruction.	

51 See Appendix K for proposed allotment and funding distribution changes to direct more funding to students of need and promote flexibility in the use of funds by adjusting the transfer provisions on the allotment system.

Critical Need	Description of action	Estimated amount (if available)
Teachers, Phase III	Provide teachers with the required time and support to engage in high-quality professional learning opportunities that align with the needs of individual teachers, teacher teams, and schools.	
Principals, Phase I	Revise the principal salary structure and improve working conditions to make the principalship more attractive to qualified educators, especially those in high-need schools.	
Principals, Phase I	Provide incentives for school leaders to work in high-need schools, such as a meaningful supplement for principals who take a position to turn around a persistently failing school and protection against principals having a salary reduction if they go to work in a low-performing school.	
Principals, Phase I	Reward school leaders for their school's progress on indicators that go beyond student achievement on standardized assessments.	
Principals, Phase II	Expand, scale, and/or replicate statewide the successful professional learning opportunities for current principals and assistant principals.	
Principals, Phase II	Create a statewide mentorship program for beginning assistant principals and principals so that all beginning school administrators are provided with a coach.	
Principals, Phase II	Increase the number of nurses, counselors, social workers, and psychologists available in schools so that principals have access to professionals who are trained to address students' physical and mental health and out-of-school issues that impede their learning.	
Early Childhood, Phase II	Align elementary school settings to the needs of young children in grades K–3 to support their transition to school by expanding principal professional development in early childhood; providing adequate funds for teaching assistants and specialized personnel support in line with nationally recommended ratios; and utilizing formative assessments across early education settings and grades K–3 to guide instructional practices. ⁵²	
Account & Assessment, Phase I	Improve coherence among curriculum, instruction, and assessment by promoting the use of high-quality, aligned instructional materials and bolstering professional development efforts and state-provided resources related to standards-based instruction and standards implementation.	

Exhibits 61 shows how the recommended, ongoing sequenced investment in North Carolina K–12 public schools and districts would occur over the next eight years. This scenario assumes several waves of investment and presents the amount of investment annually and cumulatively.

⁵² This action is appropriately listed under this critical need area; but note that it is included in the sum of additional investments for K–12 education and not early childhood education.

Exhibit 61. Recommended ongoing sequenced investment in North Carolina K–12 public schools and district operation budgets⁵³

Biennium	Annual amount (\$ millions) ⁵⁴	Cumulative amount (\$ millions)	Description of actions funded by these investments
FY2020–2021	\$463	\$926	Phase I: Highest-priority actions that require immediate attention, are fundamental to the success of other actions, and build critical capacity to sustain improvement
FY2022–2023	\$463	\$1,852	Phase II: Prioritized actions that build on Phase I commitments, depend on capacity built by Phase I actions, and/or serve to initiate additional capacity-building efforts critical to success of future efforts
FY2024–2025	\$463	\$2,778	Phase III: Actions that continue to build on Phase I and II commitments and are sequenced to further build capacity for successful implementation and sustainability of efforts
FY2026–2027	\$463	\$3,704	

Recommended Sequenced Investments in North Carolina Early Childhood Education (ECE) Programs

As noted previously, this study suggests that in order to meet the *Leandro* requirements and close gaps between low-performing students and their higher-achieving peers, the state needs to invest \$1.18 billion in ongoing funding. Exhibit 62 below provides a table of the actions that would fall into these short-term investments and, when available, cost estimates. As noted earlier in the Finance and Resource Allocation section, the modeling looked at total recommended investment needed to reach academic proficiency rates necessary for *Leandro* compliance. When cost information was available for specific recommendations or actions, those costs were included below. Those items that the state intends to move forward should be costed out.

⁵³ These figures identify the amount necessary to directly invest in public schools and districts and do not include any spending associated with state-level activities.

⁵⁴ These year-by-year investments do not account for annual adjustments for inflation.

Exhibit 62. Recommended actions and cost estimates for short-term sequenced investments

Critical Need	Description of action	Estimated amount (if available)
ECE, Phase I	Set a target for reaching universal full-day, full-year Pre-K delivery by 2026.	
ECE, Phase I	Expand the NC Pre-K program to provide high-quality, full-day, full-year services to all at-risk 4-year-olds by increasing reimbursement rates to cover higher-quality services and to account for expanded full-day, full-year programming.	\$571 million per year after ramp-up for NC Pre-K expansion
ECE, Phase I	Fund Smart Start to enable communities to use the flexible funds to increase quality, access, and support for all early childhood education students, including at-risk children and their families.	\$532 million per year after ramp-up for Smart Start expansion to 25% of need
ECE, Phase I	Establish a data collection process to identify the children and families in need of services and use data collected to determine the number of early childhood teachers and staff necessary to provide high-quality early childhood education services to all eligible 4-year-olds.	
ECE, Phase I	Increase the volume and quality of the early childhood educator pipeline to meet need by linking compensation packages to public school schedules; expanding the WAGE\$ Salary Supplement Program and the Infant Toddler Educator AWARDS Program to support salary schedule growth; using recruitment efforts such as scholarships, loan forgiveness, and residency programs; and implementing an accessible statewide system of professional development.	
ECE, Phase II	Require local NC Pre-K committees to include in their annual implementation a plan to increase the number of slots each year and goals and strategies for family outreach.	\$172 million per year after ramp-up for increased subsidies to children and families
ECE, Phase III	Continue to support early childhood educators through a statewide system of high-quality ongoing professional learning that inducts new early childhood teachers and supports ongoing learning in critical areas of practice.	
ECE, Phase III	Provide additional funding for transportation for children and families to get to NC Pre-K sites in both public and private settings. ⁵⁵	

Exhibit 63 shows how the recommended, sequenced investment in North Carolina early childhood education programs would occur over the next eight years. This scenario assumes several years of investment and presents the amount of investment annually and cumulatively.

⁵⁵ The costs associated with this action are subsumed under the costs for the NC Pre-K action and early childhood educator compensation actions in Phase I.

Exhibit 63. Recommended sequenced investment in North Carolina early childhood education programs⁵⁶

Biennium	Total amount (\$ millions) ⁵⁷	Cumulative amount (\$ millions)	Description of actions funded by these investments
FY2020–2021	\$147	\$294	Phase I: Highest-priority actions that require immediate attention, are fundamental to the success of other actions, and build critical capacity to sustain improvement
FY2022–2023	\$147	\$588	Phase II: Prioritized actions that build on Phase I commitments, depend on capacity built by Phase I actions, and/or serve to initiate additional capacity-building efforts critical to success of future efforts
FY2024–2025	\$147	\$882	Phase III: Actions that continue to build on Phase I and II commitments and are sequenced to further build capacity for successful implementation and sustainability of efforts
FY2026–2027	\$147	\$1,176	

Recommended Sequenced Investments in North Carolina State-level Supports

As noted previously, this study suggests that in order to meet the *Leandro* requirements and close gaps between low-performing students and their higher-achieving peers, the state needs to invest \$14.4 million in ongoing funding. Exhibit 64 below provides a table of the actions that would fall into these short-term investments and, where available, cost estimates. As noted earlier in the Finance and Resource Allocation section, the modeling looked at total recommended investment needed to reach academic proficiency rates necessary for *Leandro* compliance. When cost information was available for specific recommendations or actions, those costs were included below. Those items that the state intends to move forward should be costed out.

⁵⁶ This simulated investment does not include funding support to raise wages for early childhood educators, which would be an additional investment beyond those stated in this table.

⁵⁷ These year-by-year investments do not account for annual adjustments for inflation between FY19 and FY27.

Exhibit 64. Recommended actions and cost estimates for state-level support investments

Critical Need	Description of action	Estimated amount (if available)
Teachers; Phase I	Expand the role of the Professional Educator Preparation and Standards Commission to involve stakeholders in establishing high standards for North Carolina educators (e.g., responsive to 21st-century learning standards and supportive of a well-prepared, culturally competent workforce) and to make recommendations regarding all aspects of preparation, licensure, continuing education, and standards of conduct of public school educators.	
Teachers; Phase I	Review state teacher testing requirements to ensure that any testing barriers to entry that are unrelated to capacity to teach effectively are removed and that there are multiple ways to demonstrate competency.	
Teachers; Phase I	Improve and expand the Teaching Fellows program by increasing the overall funding to support additional awards; increasing the number of partner institutions to include different regions of the state and minority-serving institutions; developing recruitment strategies that inform and attract candidates of color; reinstating the additional leadership training that Teaching Fellows previously received, including training on topics such as culturally responsive and trauma-informed practices and teaching students with disabilities; providing a shorter payback period (four years) for those who teach in any high-poverty school.	\$8.25M per year after ramp-up
Teachers; Phase I	Set data-informed goals to increase the racial-ethnic diversity of the teacher workforce and annually report on progress.	
Teachers; Phase I	Expand the role of the Professional Educator Preparation and Standards Commission to include developing recommendations to ensure that all educators have access to high-quality professional learning opportunities relevant to their needs.	
Teachers; Phase II	Use licensing and accreditation rules and provide grants to educator preparation programs (EPPs) to improve clinical training and learning for standards-based, culturally responsive, trauma-informed teaching.	
Teachers; Phase II	Have the NCDPI and EPPs partner with LEAs to identify ways to be more intentional about recruiting and retaining a diverse teacher workforce and building the pipeline.	
Teachers; Phase II	Have the NCDPI provide guidance and support for LEA talent officers and human resources staff on successful practices to build and sustain a diverse workforce.	
Teachers; Phase I	Establish a Transition to Advanced Teaching Roles program that leads cohorts of districts and schools through a common design process.	
Teachers; Phase I	Plan ongoing evaluation and ongoing continuous improvement efforts to better understand the outcomes from advanced teaching roles.	
Teachers; Phase II	Implement Learning Forward's Standards for Professional Learning to serve as guidance for the design and assessment of professional learning opportunities and to inform continuous improvement and future funding decisions.	

Critical Need	Description of action	Estimated amount (if available)
Teachers; Phase II	Invest in building the capacity and infrastructure to support more personalized and job-embedded professional learning opportunities for teachers by coordinating with various entities across the state, such as colleges and universities and regional technical assistance providers.	
Principals; Phase I	Update the state's principal preparation and principal licensure requirements to align to the National Education Leadership Preparation Standards and require principal preparation programs (PPPs) to demonstrate that they are preparing candidates to meet these standards.	
Principals Phase I	Expand the number of fellowships available through the Principal Fellows program and actively recruit diverse candidates to apply to be Principal Fellows.	
Principals Phase I	Expand the Transforming Principal Preparation Program (TP3) while maintaining high standards for participating programs and the paid internship requirement; expand the TP3 focus on preparing transformation leaders of low-performing, high-poverty schools; set the goal of having each school district partner with at least one of the TP3 programs; recruit diverse candidates to the TP3 programs and establish TP3 programs in minority-serving universities.	
HPS; Phase II	Include opportunity-to-learn indicators in the state's accountability system to better gauge the ability of high-poverty schools and other schools serving disadvantaged students to contribute to student success.	
Account & Assessment; Phase I	Revise the student assessment system to become more balanced and student-centered by expanding the use of the NC Check-Ins and providing guidance to LEAs to streamline the number of assessments at the local level, mitigating the use of multiple assessments for similar purposes.	
Account & Assessment; Phase I	Clarify alignment between the assessment system and the state's theory of action.	
Account & Assessment; Phase I	Update state assessment to include items that measure a deeper and broader understanding of students' knowledge, skills, and abilities.	
Account & Assessment; Phase I	Revise achievement levels to align with the court's standard of a sound basic education, with a singular definition of proficiency that aligns with grade-level and college- and career-readiness expectations and that provides stakeholders with consistent and actionable measures of student progress and proficiency.	
Account & Assessment; Phase I	Adopt a framework for accountability with a comprehensive set of measures that would indicate progress toward meeting the <i>Leandro</i> requirements and is inclusive of the reporting requirements under ESSA.	
Account & Assessment; Phase II	Amend the NC Dashboard to provide data on state, district, and school performance and growth on a comprehensive set of measures that would indicate progress toward meeting the <i>Leandro</i> requirements and is inclusive of the reporting requirements under ESSA.	

Critical Need	Description of action	Estimated amount (if available)
Account & Assessment; Phase II	Develop a process for identifying schools for support and improvement that uses a set of decision rules to meet the requirements under ESSA and <i>Leandro</i> (e.g., identify schools with the lowest performance on the greatest number of indicators or identify schools with the greatest number of low-performing indicators, but give certain academic indicators greater weight).	
Account & Assessment; Phase III	Monitor the state's assessment system for alignment to standards and use data to make changes as needed.	
Account & Assessment; Phase III	Appoint a panel of education experts to help the Court monitor the state's plans, initiatives, and progress in meeting the <i>Leandro</i> requirements.	
Monitor; Phase I	Report on and file annual reports of plans and progress on meeting the <i>Leandro</i> requirements.	\$500,000 per year after ramp-up
Monitor; Phase II	Report on and file annual reports of plans and progress on meeting the <i>Leandro</i> requirements. Update the <i>Leandro</i> Action Plan, as needed.	
Monitor; Phase III	Rebuild the state's capacity to fully support the improvement of low-performing schools by defining the state's overall approach to driving improvement in student outcomes; rebuilding the staff capacity within the NCDPI to lead district and school transformation; defining regional structures of support; and providing resources to build the capacity of regional collaboratives or teams, RESAs, and other vetted providers to support LEAs in their regions.	
SSOS; Phase I	Identify approved school improvement providers to assist LEAs and schools.	
SSOS; Phase I	Create a statewide repository of evidence-based school improvement practices.	
SSOS; Phase I	Implement an effective regional system of support for LEAs, low-performing schools, and high-poverty schools that is driven by outcomes for all students by providing technical assistance in school improvement; leadership coaching; development of instructional coaches; adoption and scale-up of evidence-based practices, including early literacy programs, whole-child supports, training for MTSS and SW-PBIS; and formative assessment using NC Check-Ins.	\$6.7 million per year after ramp-up
SSOS; Phase I	Provide statewide and/or regional support to help all schools and districts select core curriculum resources that are high quality, standards aligned, and culturally responsive and to prepare teachers to use those resources effectively and with fidelity.	
SSOS; Phase II	Provide RESAs and/or other regional collaboratives with technical assistance support to define school improvement services and build staff capacity and structure for the provision of services in the regions.	

Critical Need	Description of action	Estimated amount (if available)
SSOS; Phase III	Scale up the regional system of support so that every low-performing school has access to and is receiving technical assistance aligned to its school improvement plan and its goals for closing achievement gaps and so that all schools and LEAs have access to high-quality professional development.	
SSOS; Phase III	Conduct ongoing progress monitoring and a statewide evaluation of the state and regional system of support to measure impact and inform continuous improvement.	

Exhibit 65 shows how the recommended, sequenced investment in North Carolina state-level supports programs would occur over the next eight years. This scenario assumes several waves of investment and presents the amount of investment annually and cumulatively.

Exhibit 65. Recommended sequenced investment in North Carolina state-level supports⁵⁸

Biennium	Total amount (\$ millions) ⁵⁹	Cumulative amount (\$ millions)	Description of actions funded by these investments
FY2020–2021	\$1.93	\$3.86	Phase I: Highest-priority actions that require immediate attention, are fundamental to the success of other actions, and build critical capacity to sustain improvement
FY2022–2023	\$1.93	\$7.72	Phase II: Prioritized actions that build on Phase I commitments, depend on capacity built by Phase I actions, and/or serve to initiate additional capacity-building efforts critical to success of future efforts
FY2024–2025	\$1.93	\$11.58	Phase III: Actions that continue to build on Phase I and II commitments and are sequenced to further build capacity for successful implementation and sustainability of efforts
FY2026–2027	\$1.93	\$15.44	

⁵⁸ This only includes sequenced investments for items that have been costed out through this study. There are recommended actions identified that have not been costed out that would be added to this estimate.

⁵⁹ These year-by-year investments do not account for annual adjustments for inflation between FY19 and FY27.


Conclusion

This comprehensive action plan is designed to provide a roadmap of the actions and investments that are needed for state leadership to meet the constitutional obligation to provide every child in North Carolina with the opportunity for a sound basic education. To address the eight critical-need areas identified in the research, short- and long-term actions and investments are needed, including the following:

1. **Revise the state funding model to provide adequate, efficient, and equitable resources.**
2. **Provide a qualified, well-prepared, and diverse teaching staff in every school.**
3. **Provide a qualified and well-prepared principal in every school.**
4. **Provide all at-risk students with the opportunity to attend high-quality early childhood programs to ensure they can begin kindergarten fully ready to learn.**
5. **Direct additional resources, opportunities, and initiatives to economically disadvantaged students.**
6. **Revise the student assessment system and school accountability system to provide actionable data and monitor progress toward compliance with the *Leandro* requirements.**
7. **Build an effective regional and statewide system of support for the improvement of low-performing and high-poverty schools in North Carolina.**
8. **Convene an expert panel to assist the Court in monitoring state policies, plans, programs, and progress over time.**

Moving forward on this set of recommended actions will enable the state to lead its education system on a path toward a future where many more economically disadvantaged students have a chance to meet challenging academic standards and become college and career ready.

North Carolina has tremendous assets to draw upon in undertaking this work, including a strong state economy, a deep and long-standing commitment to public education to support the social and economic welfare of its citizens, and an engaged business community that sees the value and economic benefits of the public education system. It has a highly regarded system of higher education and community colleges accessible statewide. And



the North Carolina educator workforce is highly committed and working diligently every day to meet the needs of at-risk children, even contributing their own resources whenever they can to fill needs.

The state also has a history of launching and sustaining successful education initiatives. It invested in building a strong core of teacher-leaders, has the most NBPTS-certified educators of any state, piloted models to leverage teacher leadership, and launched innovative programs for preparing teachers and principals. The state has high-quality data systems, has highly rated early learning programs, and has been a leader in digital learning. Leveraging these many assets and building on its strong history of leadership for education will support North Carolina as it takes on the new challenge to transform its system to ensure access to a sound basic education for all students.

References

- Aldeman, C., Hyslop, A., Marchitello, M., Schiess, J. O., & Pennington, K. (2017). *An independent review of ESSA state plans: North Carolina*. Sudbury, MA: Bellwether Education Partners. Retrieved from <https://bellwethereducation.org/publication/independent-review-essa-state-plans>
- Alliance for Excellent Education. (2018). *The graduation effect*. Retrieved from <http://impact.all4ed.org/>
- Agnew, L., Brooks, J., Browning, A., & Westervelt, G. (2019). *High-quality early childhood education in North Carolina: A fundamental step to ensure a sound basic education*. San Francisco, CA: WestEd.
- Andrews, M., Duncombe, W., & Yinger, J. (2002). Revisiting economies of size in American education: Are we any closer to a consensus? *Economics of Education Review*, 21(3), 245–262.
- Ashley, P. (2019, April). *Turnaround efforts in North Carolina*. Presentation at a meeting of the North Carolina Governor's Commission on Access to a Sound Basic Education. Raleigh, NC.
- Augenblick, J., Myers, J., & Silverstein, J. (2001). *A comprehensive study on the organization of Kansas school districts* (Report No. 00241). Prepared for the Kansas State Board of Education. Topeka, KS: Augenblick & Myers.
- Barnett, W. S. (2019). *Barriers to expansion of NC Pre-K: Problems and potential solutions*. New Brunswick, NJ: National Institute for Early Education Research.
- Bastian, K. C., & Fuller, S. C. (2015). *The North Carolina Principal Fellows program: A comprehensive evaluation*. Chapel Hill, NC : Education Policy Initiative at Carolina.
- Bastian, K. C., & Goff, P. (2017). *North Carolina school leadership survey: Initial report*. Chapel Hill, NC : Education Policy Initiative at Carolina. Retrieved from https://publicpolicy.unc.edu/files/2017/06/Administrator-Survey-Report_Final-5-24-17.pdf
- Bastian, K. C., & Henry, B. T. (2014). The apprentice: Pathways to the principalship and student achievement. *Education Administration Quarterly*, 51(4), 600–639.
- Bastian, K. C., & Marks, J. T. (2017). Connecting teacher preparation to teacher induction: Outcomes for beginning teachers in a university-based support program in low-performing schools. *American Educational Research Journal*, 54(2), 360–394. Retrieved from <https://doi.org/10.3102/0002831217690517>
- Belfield, C. R., & Levin, H. M. (2007). *The price we pay: Economic and social consequences of inadequate education*. Washington, DC: Brookings Institution Press.
- Berry, B., Bastian, K. C., Darling-Hammond, L., & Kini, T. (2019). *How teaching and learning conditions affect teacher retention and school performance in North Carolina*. Palo Alto, CA: Learning Policy Institute.
- Béteille, T., Kalogrides, D., & Loeb, S. (2012). Stepping stones: Principal career paths and school outcomes. *Social Science Research*, 41(4), 904–919.
- Bowden, A. B., & Davis, R. (2019). *Addressing Leandro: Supporting student learning by mitigating student hunger*. Raleigh, NC: North Carolina State University.
- Brown, K. M. (2014). *North Carolina regional leadership academies: Final summative activity report*. Chapel Hill, NC: University of North Carolina at Chapel Hill. Retrieved from <https://cerenc.org/wp-content/uploads/2014/08/0 - FINAL - Summative RLA Report - 8 6 14.pdf>
- Brunetti, M., Hemberg, B., Brandt, C., & McNeilly, M. (2019). *North Carolina's statewide assessment system: How does the statewide assessment system support progress toward meeting the Leandro tenets?* San Francisco, CA: WestEd.
- Burkhauser, S., Gates, S. M., Hamilton, L. S., & Ikemoto, G. S. (2012). *First-year principals in urban school districts: How actions and working conditions relate to outcomes* (Technical report). Santa Monica, CA: RAND Corporation.
- Business for Educational Success and Transformation (BEST). (2018). *Transforming principal preparation in North Carolina* (Policy brief). Raleigh, NC: Author. Retrieved from <http://best-nc.org/wp-content/uploads/2018/02/Transforming-Principal-Preparation-FINAL.pdf>
- Canback, S. (1998). *Managerial diseconomies of scale: Literature survey and hypotheses anchored in transaction cost economics* (Industrial Organization 9810001). Munich, Germany: University Library of Munich.
- Cardichon, J., Darling-Hammond, L., Espinoza, D., & Kostyo, S. (2019). *North Carolina's statewide accountability system: How to effectively measure progress toward meeting the Leandro tenets*. Palo Alto, CA: Learning Policy Institute.
- Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute.

- Clotfelter, C. T., Ladd, H. F., Vigdor, J. L., & Diaz, R. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Policy Analysis and Management*, 23(2), 251–271.
- Coleman, J. S. (1966). *Equality of educational opportunity*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research, University of Michigan.
- Coltrane, S. S., & Eads, L. M. (2018). *Career and College Promise (CCP) and Cooperative Innovative High School (CIHS) study report*. Presentation to the North Carolina Joint Legislative Education Oversight Committee, March 2018.
- Cotti, C., Gordanier, J., & Ozturk, O. (2018). When does it count? The timing of food stamp receipt and educational performance. *Economics of Education Review*, 66, 40–50.
- Darling-Hammond, L., Bastian, K., Berry, B., Carver-Thomas, D., Kini, T., Levin, S., & McDiarmid, W. (2019). *Educator supply, demand, and quality in North Carolina: Current status and recommendations*. Palo Alto, CA: Learning Policy Institute.
- Darling-Hammond, L., Hyler, M., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report>
- Darling-Hammond, L., Saunders, R., Podolsky, A., Kini, T., Espinoza, D., Hyler, M., & Carver-Thomas, D. (2019). *Best practices to recruit and retain well-prepared teachers in all classrooms*. Palo Alto, CA: Learning Policy Institute.
- Dee, T. (2004). Teachers, race, and student achievement in a randomized experiment. *The Review of Economics and Statistics*, 86(1), 195–210.
- Duncombe, W. D., & Yinger, J. (2004). *How much more does a disadvantaged student cost?* Syracuse, NY: Center for Policy Research at Syracuse University. Retrieved from <https://surface.syr.edu/cgi/viewcontent.cgi?article=1102&context=cpr>
- Edin, K., Boyd, M., Mabli, J., Ohls, J., Worthington, J., Greene, S., Redel, N., & Sridharan, S. (2013). *SNAP food security in-depth interview study* (No. cad6b24b82bd-4318b8459c8ef2cd0ff7). Cambridge, MA: Mathematica Policy Research.
- Ernst & Young LLP. (2018). *NC DPI organizational assessment*. Author.
- Espinoza, D., & Cardichon, J. (2017). *Investing in effective school leadership: How states are taking advantage of opportunities under ESSA*. Palo Alto, CA: Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/product/investing-effective-school-leadership-brief>
- Espinoza, D., Saunders, R., Kini, T., & Darling-Hammond, L. (2018). *Taking the long view: State efforts to solve teacher shortages by strengthening the profession*. Palo Alto, CA: Learning Policy Institute.
- Etheridge, B. (1993). *The history of education in North Carolina*. Raleigh, NC: North Carolina Department of Public Instruction. Retrieved from <https://files.eric.ed.gov/fulltext/ED369713.pdf>
- Farley-Ripple, E. N., Raffel, J. A., & Welch, J. C. (2012). Administrator career paths and decision processes. *Journal of Educational Administration*, 50(6), 788–816.
- Feeding America. (2016). *Child food insecurity in North Carolina by county in 2016*. Retrieved from https://www.feedingamerica.org/sites/default/files/research/map-the-meal-gap/2016/child/NC_AllCounties_CDs_CFI_2016.pdf
- Fisher, D., Frey, N., & Hattie, J. (2016). *Visible learning for literacy*. Thousand Oaks, CA: Corwin Press.
- Fuller, E. J., Young, M. D., Richardson, M. S., Pendola, A., & Winn, K. M. (2018). *The pre-K–8 school leader in 2018: A 10-Year Study*. Alexandria, VA: National Association of Elementary School Principals.
- Galster, G. C. (2010, February). *The mechanism(s) of neighborhood effects: Theory, evidence, and policy implications*. Presentation at the Economic and Social Research Council Seminar, University of St. Andrews, Fife, Scotland, UK.
- Garcia, E., & Weiss, E. (2017). *Education inequalities at the school starting gate. Gaps, trends, and strategies to address them*. Washington, DC: Economic Policy Institute. Retrieved from <https://www.epi.org/publication/education-inequalities-at-the-school-starting-gate/>
- Gassman-Pines, A., & Bellows, L. (2018). Food instability and academic achievement: A quasi-experiment using SNAP benefit timing. *American Educational Research Journal*, 55(5), 897–927.
- Gates, S. M., Baird, M. D., Master, B. K., & Chavez-Herrerias, E. R. (2019). *Principal pipelines: A feasible, affordable, and effective way for districts to improve schools*. New York, NY: The Wallace Foundation.
- General Assembly of North Carolina. (2017). *Current Operations Appropriations Act of 2017*. No. 257. Retrieved from <https://www.ncleg.net/Sessions/2017/Bills/Senate/PDF/S257v9.pdf>
- Gershenson, S., Hart, C. M. D., Lindsay, C. A., & Papageorge, N. W. (2017). *The long-run impacts of same-race teachers* (IZA Institute of Labor Economics discussion paper series). Bonn, Germany: IZA — Institute of Labor Economics.
- Goldring, R., and Taie, S. (2014). *Principal attrition and mobility: Results from the 2012–13 principal follow-up survey*. Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014064rev>
- Grissom, J. A. (2011). Can good principals keep teachers in disadvantaged schools? Linking principal effectiveness to teacher satisfaction and turnover in hard-to-staff environments. *Teachers College Record*, 113(11), 2552–2585.
- Guha, R., Hyler, M. E., & Darling-Hammond, L. (2016). *The teacher residency: An innovative model for preparing teachers*. Palo Alto, CA: Learning Policy Institute.

- Guindon, M., Huffman, H., Socol, A. R., & Takahashi-Rial, S. (2014). *How much testing is taking place in North Carolina schools at grades K–12? An analysis of federal, state, and local required assessments*. Raleigh, NC: Financial and Business Services Internship Program. Retrieved from <http://www.dpi.state.nc.us/docs/intern-research/reports/testing2014.pdf>
- Heckman, J., & Karapakula, G. (2019). *Intergenerational and intragenerational externalities of the Perry Preschool Project*. Chicago, IL: The Heckman Equation. Retrieved from <https://heckmanequation.org/resource/perry-preschool-midlife-toolkit/>
- Heckman, J., Pinto, R., and Savelyev, P. (2013) Understanding the mechanisms through which an influential early childhood program boosted adult outcomes. *American Economic Review*, 103(6), 2052–2086.
- Henry, G. T., Bastian, K. C., & Smith, A. A. (2012). Scholarships to recruit the “best and brightest” into teaching: Who is recruited, where do they teach, how effective are they, and how long do they stay? *Educational Researcher*, 41(3), 83–92.
- Henry, G. T., Purtell, K. M., Bastian, K. C., Fortner, C. K., Thompson, C. L., Campbell, S. L., & Patterson, K. M. (2014). The effects of teacher entry portals on student achievement. *Journal of Teacher Education*, 65, 7–23.
- Henry, H. G. (2015, September). *Outcomes and impacts of North Carolina’s initiative to turn around the lowest-achieving schools*. (Report for the Consortium for Educational Research and Evaluation — North Carolina). Retrieved from <http://cerenc.org/wp-content/uploads/2015/09/0-FINAL-Final-DST-Report-9-3-15.pdf>
- Hoke County Bd. of Ed. v. State, 358 N.C. 605, 599 S.E.2d 365 (2004).
- Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* (Research report #RR-82). Philadelphia, PA: University of Pennsylvania Consortium for Policy Research in Education.
- Kaufman, J. H., Gates, S., Harvey, M., Wang, Y., & Barrett, M. (2016). *What it takes to operate and maintain principal pipelines: Costs and other resources*. New York, NY: The Wallace Foundation.
- Koehler, P., Peterson, M., & Agnew, L. (2019). *Attracting, preparing, supporting, and retaining educational leaders in North Carolina*. San Francisco, CA: WestEd.
- Konoske-Graf, A., Partelow, L., & Benner, M. (2016). *To attract great teachers, school districts must improve their human capital systems*. Retrieved from <https://cdn.americanprogress.org/content/uploads/2016/12/30080355/HumanCapitalSurvey-report.pdf>
- Leandro v. State, 346 N.C. 336, 488 S.E.2d 249 (1997).
- Leithwood, K., Seashore Louis, K., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. New York, NY: The Wallace Foundation. Retrieved from <https://www.wallacefoundation.org/knowledge-center/Documents/How-Leadership-Influences-Student-Learning.pdf>
- Loeb, S., Kalogrides, D., & Horng, E. (2010). Principal preferences and the uneven distribution of principals across schools. *Educational Evaluation and Policy Analysis*, 32(2), 205–229.
- Loeb, S., Kalogrides, D., & Horng, E. L. (2012). Stepping stones: Principal career paths and school outcomes. *Social Science Research*, 41(4), 904–919.
- Maier, A., Daniel, J., Oakes, J., & Lam, L. (2017). *Community schools as an effective school improvement strategy: A review of the evidence*. Palo Alto, CA: Learning Policy Institute.
- Matlach, L. (2015). *Supporting and retaining effective principals*. Washington, DC: Center on Great Teachers and Leaders at American Institutes for Research. Retrieved from https://gtlcenter.org/sites/default/files/Snapshot_Retaining_Effective_Principals.pdf
- Memorandum of Decision, *Hoke County Board of Education v. State* (Wake Co. Super. Ct., Oct. 12, 2000).
- Minnici, A., Beatson, C., Berg-Jacobson, A., & Ennis, J. (2019). *Developing and supporting North Carolina’s teachers*. San Francisco, CA: WestEd.
- Muschkin, C. G., Ladd, H. F., & Dodge, K. A. (2015). Impact of North Carolina’s early childhood initiatives on special education placements in third grade. *Educational Evaluation and Policy Analysis*, 37(4), 478–500.
- myFutureNC Commission. (2019, February). *A call to action for the state of North Carolina*. Retrieved from https://www.myfuturenc.org/wp-content/uploads/2019/04/A-Call-to-Action-Final-Report_040319.pdf
- National Board for Professional Teaching Standards. (2018). *2018 state rankings by total number of National Board certified teachers*. Retrieved from https://www.nbpts.org/wp-content/uploads/StateRankings_All_NBCTs.pdf
- National Center for Education Statistics. (2017). Table 204.20: *English language learner (ELL) students enrolled in public elementary and secondary schools, by state: Selected years, fall 2000 through fall 2015*. Retrieved from https://nces.ed.gov/programs/digest/d17/tables/dt17_204.20.asp
- National Center for Education Statistics. (2018). Table 204.10: *Number and percentage of public school students eligible for free or reduced-price lunch, by state: Selected years, 2000–01 through 2015–16*. Retrieved from https://nces.ed.gov/programs/digest/d17/tables/dt17_204.10.asp
- National Commission on Teaching & America’s Future. (Ed.). (1996). *What matters most: Teaching for America’s future* (1st ed). New York, NY, & Woodbridge, VA: The Commission. Retrieved from <http://www.namodemello.com.br/pdf/tendencias/whatmattersmost.pdf>
- National Education Association. (2018a). *Rankings of the states 2017 and estimates of school statistics 2018, Table B-6* (p. 26). Retrieved from <http://www.nea.org/home/73145.htm>
- National Education Association. (2018b). *2017–2018 average starting teacher salaries by state*. Retrieved from <http://www.nea.org/home/2017-2018-average-starting-teacher-salary.html>

- National Education Association. (n.d.). *Rankings of states and estimates of school statistics*. Retrieved from <http://www.nea.org/home/44479.htm>
- National Education Goals Panel. (1999). *The National Education Goals report: Building a nation of learners, 1998*. Washington, DC: U.S. Government Printing Office.
- National Policy Board for Educational Administration. (2018). *National Educational Leadership Preparation (NELP) program standards — Building level*. Retrieved from <http://npbea.org/>
- New Teacher Center. (2018). *2018 North Carolina Teacher Working Conditions Survey scatterplots companion*. Retrieved from https://ncteachingconditions.org/uploads/File/NC18_companion_for_composites.pdf
- North Carolina Department of Commerce. (2018). *North Carolina employment projections to 2026*. Retrieved from <https://www.nccommerce.com/blog/2018/10/10/north-carolina-employment-projections-2026>
- North Carolina Department of Public Instruction. (2017). *Year-to-date allocation data*. Accessed October 18, 2018. Retrieved from <http://apps.schools.nc.gov/ords/f?p=144:1>
- North Carolina Department of Public Instruction. (2018a). *The Elementary and Secondary Education Act, as amended by the Every Student Succeeds Act Consolidated State Plan, North Carolina*. Retrieved from <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>
- North Carolina Department of Public Instruction. (2018b). *Financial and business services data reports — Student accounting*. Retrieved from <http://www.ncpublicschools.org/docs/fbs/accounting/data/adm/2018-19admmltd.xlsx>
- North Carolina Department of Public Instruction. (2018c, February). *2016–2017 state of the teaching profession in North Carolina: Report to the North Carolina General Assembly*. Presented at the North Carolina General Assembly. Retrieved from <http://www.ncpublicschools.org/docs/district-humanresources/surveys/leaving/2016-17-state-teaching-profession.pdf>
- North Carolina Department of Public Instruction. (2019a). *Table 16 — State Summary of Public School Full-Time Personnel*. Retrieved from <http://apps.schools.nc.gov/ords/f?p=145:21::NO::>
- North Carolina Department of Public Instruction. (2019b). *Table 16.1 — State Summary of Charter School Full-Time Personnel*. Retrieved from <http://apps.schools.nc.gov/ords/f?p=145:26::NO::>
- North Carolina Department of Public Instruction. (2019c). *Financial & Business: Budget & Financial. Proposed Budgets Comparison FY 2019–20*. Accessed June 2019. Retrieved from <http://www.dpi.state.nc.us/fbs/budget/>
- North Carolina Department of Public Instruction. (n.d.). *Historical trends and results: 1992–93 to 2017–18 End-of-Grade general test results*. Retrieved from <http://www.ncpublicschools.org/docs/accountability/reports/green/histrnds1718.pdf>
- North Carolina Department of Public Instruction. (n.d.). *Statistical profile: A history of pupil membership by race*. Retrieved from <http://apps.schools.nc.gov/ords/f?p=145:16::NO::>
- North Carolina Department of Public Instruction. (n.d.). *Table 24 — Per-pupil expenditure ranking*. Retrieved from <http://apps.schools.nc.gov/ords/f?p=145:34::NO::>
- North Carolina Office of State Budget and Management. (2019). *Certified budget summary by purpose*. Retrieved from https://files.nc.gov/ncosbm/documents/files/2017-19_Certified_U10_UNCGA.pdf
- North Carolina Partnership for Children, Inc. (2019). *Composition of Smart Start's funding formula*. Raleigh, NC: Author.
- North Carolina State Board of Education and North Carolina Department of Public Instruction. (2016). *2016–17 Allotment policy manual*. Raleigh, NC: Author. Retrieved from <http://www.ncpublicschools.org/docs/fbs/allotments/general/2016-17policymanual.pdf>
- Oakes, J., Cookson, P., Levin, S., Carver-Thomas, D., Frelow, F., Berry, B., Yang, M., George, J., Brooks, J., & Guin, S. (2019). *Providing an equal opportunity for a sound basic education in North Carolina's high-poverty schools: Assessing needs and opportunities*. Palo Alto, CA: Learning Policy Institute.
- Palaich, B., Reichardt, R., O'Brien, T., McDaniel, J., Wool, S., & McClelland, A. (2014). *Keeping up with the kids: Increasing minority teacher representation in Colorado*. Retrieved from <https://racce.net/wp-content/uploads/2015/06/mtrrreview.pdf>
- Ponder, K. W. (2010). *Early childhood education and North Carolina's Smart Start initiative*. Raleigh, NC: Institute for Emerging Issues, North Carolina State University.
- Public Leadership Institute. (2018). *Community schools playbook*. Washington, DC: Partnership for the Future of Learning.
- Public School Forum of North Carolina. (2018). *2018 local school finance study*. Raleigh, NC: Author. Retrieved from https://www.ncforum.org/wp-content/uploads/2018/01/2018_PSF_LocalSchoolFinanceStudy-FINAL-PDF.pdf
- Public School Forum of North Carolina. (2019). *2019 local school finance study*. Raleigh, NC: Author. Retrieved from <https://www.ncforum.org/2019-local-school-finance-study>
- Robertson, F. W. (2007). Economies of scale for large school districts: A national study with local implications. *The Social Science Journal*, 44(4), 620–629.
- Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4–36.
- Sigman, D., & Mancuso, M. (2017). *Designing a comprehensive assessment system*. San Francisco, CA: WestEd.

- Silvestre, J. (1987). Economies and diseconomies of scale. In Peter Kenneth Newman (Ed.), *The New Palgrave: A Dictionary of Economics* (2nd ed., pp. 80–84). London, England: Macmillan.
- Smart Start. (2018). *Annual report to the North Carolina General Assembly for fiscal year 2017–2018*. Raleigh, NC: Author.
- Smith, T., & Hassel, B. (2019). *Retaining and extending the reach of excellent educators: Current practices, educator perceptions, and future directions*. Chapel Hill, NC: Public Impact.
- Smithson, J. L. (2015). *A report to the North Carolina Department of Public Instruction on the alignment characteristics of state assessment instruments covering grades 3–8 and high school in mathematics, reading, and science*. Madison, WI: Wisconsin Center for Education Research.
- Stallings, D. T., Maser, R., & Steinbrecher, T. D. (2018). *Teacher compensation models and advanced teaching roles pilot programs year 1 (2017–2018) preliminary report*. Raleigh, NC: William and Ida Friday Institute for Educational Innovation at North Carolina State University.
- Sturtz McMillen, J., Carruthers, W., Lovin, P., & Hasse, E. (2018). *Transforming principal preparation grant program: Second year, annual report*. Garner, NC: GrantProse Inc.
- Sutcher, L., Podolsky, A., & Espinoza, D. (2017). *Supporting principals' learning: Key features of effective programs*. Palo Alto, CA: Learning Policy Institute.
- Taylor, L., Willis, J., Berg-Jacobson, A., Jaquet, K., & Caparas, R. (2018). *Estimating the costs associated with reaching student achievement expectations for Kansas public education students*. San Francisco, CA: WestEd.
- Tekleselasie, A. A., & Villarreal, P. (2011). Career mobility and departure intentions among school principals in the United States: Incentives and disincentives. *Leadership and Policy in Schools*, 10(3), 251–293.
- Tippett, R., & Kahn, N. (2018). *Postsecondary completion report: 2009–2016 North Carolina public high school graduates*. Raleigh, NC: myFutureNC Commission. Retrieved from <https://www.nyfuturenc.org/wp-content/uploads/2018/10/DataBrief-College-Success-v3b-2.pdf>
- TNTP. (2012). *The irreplaceables: Understanding the real retention crisis in America's urban schools*. Brooklyn, NY: Author. Retrieved from https://tntp.org/assets/documents/TNTP_Irreplaceables_2012.pdf
- Townsend, L., Mullennix, A., Tyrone, B., & Samberg, M. (2019). *Leandro Action Plan: Ensuring a sound basic education for all North Carolina students success factors study*. Raleigh, NC: Friday Institute for Educational Innovation.
- Turnbull, B., Anderson, M., Riley, D., MacFarlane, J., & Aladjem, D. (2016). *The Principal Pipeline Initiative in action*. Washington, DC: Policy Studies Associates Inc.
- University of North Carolina Educator Quality Dashboard. (2011). *Retention rates in the teaching field at three and five years of experience*. Retrieved from <https://ung4.ondemand.sas.com/SASVisualAnalyticsViewer/guest.jsp?reportPath=/UNG/External+Content/Reports&reportName=TOD+Retention+Rates&appSwitcherDisabled=true&reportViewOnly=true>
- University of North Carolina System. (n.d.). *UNC Educator Quality Dashboard demographics of public school teachers*. Retrieved from <https://eqdashboard.northcarolina.edu/demographics-of-nc-public-school-teachers/>
- U.S. Bureau of Labor Statistics. (2018, May). *Occupational outlook handbook: Elementary, middle, and high school principals*. Retrieved from <https://www.bls.gov/ooh/management/elementary-middle-and-high-school-principals.htm#tab-5>
- U.S. Census Bureau. (2019, May 21). *Annual survey of school system finances*. Retrieved from <https://www.census.gov/newsroom/press-releases/2019/school-spending.html>
- U.S. Census Bureau. (n.d.). *2012–2016 American Community Survey five-year data profiles*. Retrieved from <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2016/>
- U.S. Department of Education. (2017, October). *2017 Title II reports: National teacher preparation data*. Retrieved from <https://title2.ed.gov/Public/Home.aspx>
- U.S. Department of Labor, Bureau of Labor Statistics. (2018). *Occupational employment and labor, May 2018*. Retrieved from <https://www.bls.gov/oes/current/oes119032.htm#st>
- Wallace Foundation (2016). *Building principal pipelines: A job that urban districts can do*. New York, NY: Author. Retrieved from <https://www.wallacefoundation.org/knowledge-center/pages/perspective-building-principal-pipelines-update.aspx>
- Wechsler, M., Kirp, D., Ali, T. T., Gardner, M., Maier, A., Melnick, H., & Shields, P. M. (2016). *The road to high-quality early learning: Lessons from the states*. Palo Alto, CA: Learning Policy Institute.
- Weiss, S. P., Corn, J., Kellogg, S., Parker, B., Rodriguez, A., Smart, A., & Davis, C. (2014). *Distinguished leadership in practice: Third annual RttT evaluation report — A final summary*. Retrieved from <https://cerenc.org/wp-content/uploads/2014/12/FINAL-DLP-2013-14-Evaluation-Report-12-4-14.pdf>
- Williams, T. (2018). *Supporting and retaining principals on the job: A presentation to the Governor's Commission on access to a Sound Basic Education*. Raleigh, NC: North Carolina Principals and Assistant Principals Association.
- Willis, J., Krausen, K., Berg-Jacobson, A., Taylor, L., Caparas, R., Lewis, R., & Jaquet, K. (2019). *A study of cost adequacy, distribution, and alignment of funding for North Carolina's K–12 public education system*. San Francisco, CA: WestEd.

Appendices

Appendix A. A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K–12 Public Education System¹

The finance and resource allocation study focused on three major components of an effective education resource allocation system: (1) the *equitable distribution* of funding, (2) the *alignment* of funding to student needs, and (3) the *adequacy* of funding. The third tenet of the *Leandro* ruling makes reference to all three of these components.

Equitable Distribution: The third tenet of the *Leandro* ruling states that the system should ensure that “the educational needs of all children, including at-risk children, to have the equal opportunity to obtain a sound basic education, can be met” (*Hoke County Board of Education v. State*, 2002). As such, the third tenet relates to how the education finance system distributes funding to support educational opportunities for historically underserved student populations.

Alignment: The *Leandro* ruling also states that “the resources necessary to support the effective instructional program” should be provided in “the most cost-effective manner” (*Hoke County Board of Education v. State*, 2002). This indicates that the state should support, and not hinder, efforts to strategically allocate resources in alignment with local student need. Aligning funding to student needs requires sufficient funding stability and flexibility. Without funding stability, districts struggle to engage in multiyear budget planning — an important component not only for improving student outcomes, but also for maintaining the district’s fiscal health (Williams & Kersten, 2013). Funding flexibility is important to enabling schools to invest funds in proven, effective strategies and programs to serve their specific student populations and to uncovering new promising practices (Hill, Roza, & Harvey, 2008). Moreover, too many restrictions on funding may result in inefficient spending by limiting the extent to which districts are able or compelled to make strategic trade-offs. This component also addresses strategic implementation of changes to the state’s finance system, including the gradual phase-in of investments and accountability measures.

Adequacy: In calling for the provision of “the resources necessary to support the effective instructional program” to meet the educational needs of all students (*Hoke County Board of Education v. State*, 2002), the third tenet of the *Leandro* ruling directly reflects the need for adequate funding. *Leandro*’s other two tenets, which call for access to effective teachers and principals, also depend upon adequate funding.

Education Funding in North Carolina

North Carolina’s Current Education Funding Model

North Carolina’s current school finance system is an allotment system, based on a resource allocation model of funding. In a resource allocation model, the state determines which components are necessary for public

¹ This study brief summarizes the following paper: Willis, J., Krausen, K., Berg-Jacobson, A., Taylor, L., Caparas, R., Lewis, R., & Jaquet, K. (2019). *A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina’s K–12 Public Education System*. San Francisco, CA: WestEd.

education and provides resources specifically for each component. North Carolina is one of only seven states in the country that still utilize a resource allocation model (Program Evaluation Division, North Carolina General Assembly, 2016).

The most common alternative used by other states is the foundation model,² in which the state determines the minimum amount of funding per pupil, estimates each district’s ability to contribute local funds, and fills in the gap (Chingos & Blagg, 2017). Most foundation models determine the minimum amount of funding needed based on a weighted student formula,³ which provides additional funds for students with greater needs, such as economically disadvantaged students, English learners, students with disabilities, and students in certain grade levels (Chingos & Blagg, 2017). Although districts may have substantial flexibility in how to use these foundation funds, some states also provide a smaller proportion of their funds via categorical grants, which must be used for specific purposes, similar to North Carolina’s allotment system.

Current North Carolina Education Funding Sources and Levels

Compared with the nationwide average and with neighboring states, North Carolina’s public education system receives a substantially higher proportion of its funding from the state (see Exhibit A1). Consequently, the state wields a particularly high level of influence in directing education funds toward where they are most needed in school systems.

Exhibit A1. Public education funding by source, FY 2016

	Federal	State	Local
North Carolina	12%	62%	26%
South Carolina	10%	48%	43%
Tennessee	12%	46%	42%
Georgia	10%	46%	45%
U.S. average	8%	47%	45%

Source: National Center for Education Statistics data, FY 2016

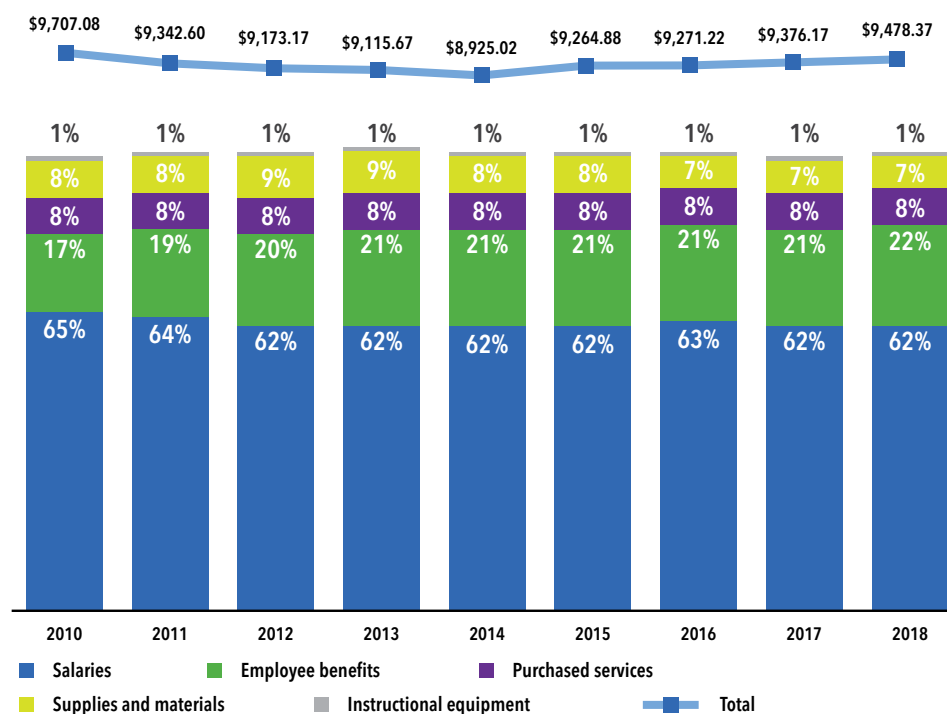
For example, adequacy of funds may depend, in part, on a local community’s wealth, resulting in only affluent communities having access to adequate funds. However, state funding can potentially correct for this inequity by directing additional resources toward less affluent districts, which also tend to serve higher-need student populations (Baker, Farrie, & Sciarra, 2018).

North Carolina dedicated 40% of its state budgeted expenditures to K–12 education in FY 2019 (North Carolina General Assembly, 2018, p. A2). As of FY 2017, the most recent year for which national rankings are available, North Carolina’s total per-pupil spending was the sixth-lowest in the nation (U.S. Census Bureau, 2019). Furthermore, when adjusted to 2018 dollars, per-pupil spending in North Carolina has declined slightly overall, about 2% since

2 The foundation model is used by 35 to 37 states, depending on how strictly one defines the term.
3 The foundation models of 33 of 37 states use weighted student funding formulas.

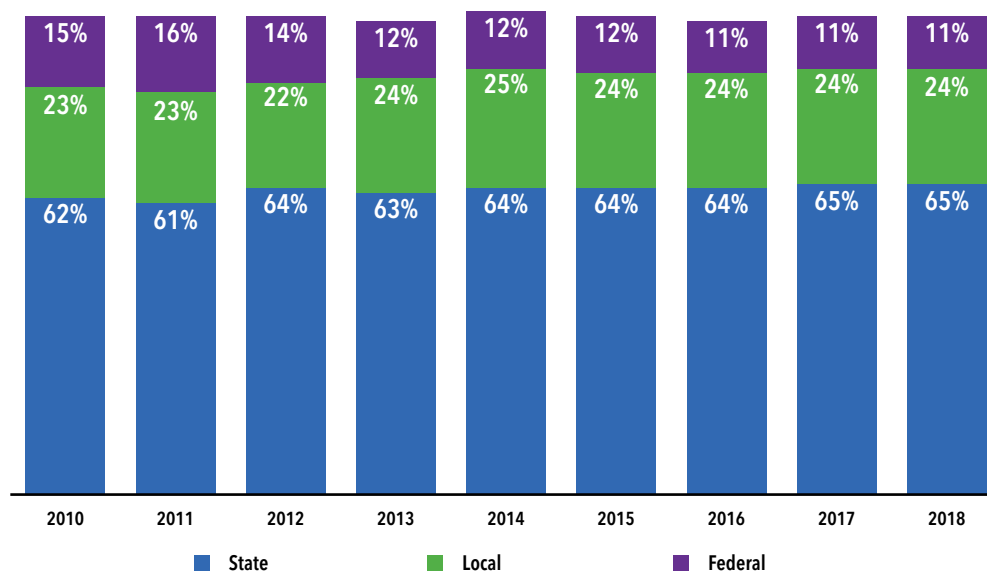
2009–10, and year-over-year funding has been relatively flat (see Exhibit A2). Finally, over this period, state and local spending has grown as a proportion of spending by 4 percentage points, from 85% to 89% (Exhibit A3).

Exhibit A2. Total per-pupil spending by category and overall, 2010–2018



Values adjusted for inflation to 2018 dollars. Due to rounding, not all bars add up to exactly 100.

Exhibit A3. Distribution of spending by source of funding, 2010–2018



Due to rounding, not all bars add up to exactly 100.

Approach

This study's research questions focus on the three critical components of effective finance systems.

1. **Distribution:** What is the current distribution of funding across schools and districts? Which factors (statutory or distribution of funds) create *inequities* in the allocation of resources, if any?
2. **Alignment:** Is funding *flexible* enough to ensure effective use of funds? Is funding *stable* enough to ensure effective use of funds?
3. **Adequacy:** *How much* funding is necessary to achieve North Carolina's goals for student outcomes?

The research design included three methods: a needs assessment, professional judgment panels, and a cost function analysis. Drawing on the study's findings, the research team developed a set of recommendations for the education finance system to support achievement of the state's goals for student performance.

Needs Assessment

The needs assessment included the collection of qualitative and quantitative data on North Carolina's current education finance system, its evolution over time, and its strengths and weaknesses. The needs assessment focused largely on research questions #1 and #2: whether resources are *distributed* equitably and whether the distribution of funding allows for *alignment* with student needs by providing sufficient flexibility and stability.

Data were collected from the following: two in-person focus groups of North Carolina school district chief financial officers (CFOs) representing a diverse range of districts (12 CFOs total); individual follow-up phone interviews (7 CFOs); a phone and an in-person interview with former North Carolina Department of Public Instruction (NCDPI) business officials (2 total); online survey responses from more than 700 North Carolina public school principals; manuals and reports published by the NCDPI; publicly available multiyear data from the NCDPI website on district allotments, expenditures, student demographics, and school characteristics; and North Carolina legislation. The needs assessment also included a review of prior research in both statewide and national contexts.

Professional Judgment Panels

The professional judgment panels (PJPs) primarily involved collecting data on educators' perceptions of the most effective allocation of resources with alignment to student need. Discussions included attention to differences in need based on schooling level and various student characteristics. Panelist input contributed to addressing all three research questions.

WestEd staff facilitated three in-person PJPs of North Carolina education practitioners — nominated because they were considered exemplary in their position — to ensure diverse representation across multiple measures, including geography, demographics, and practitioner role (e.g., district superintendent, district CFO, principal, teacher). Each group of panelists was presented with a data profile of the "typical" school environment at each schooling level: elementary, middle, and high school. Panelists were then asked to deliberate on the resources required to achieve a desired set of student outcomes in each environment. Panelists were also asked to determine

the necessary resources to serve large populations of economically disadvantaged students and exceptional children.

As part of their recommendations, panelists were tasked with keeping in mind budget constraints and considering the trade-offs involved. Finally, the panelists discussed and made recommendations related to implementation, including the timing, sequence, flexibility, and accountability of new investments.

Cost Function Analysis

A cost function analysis was the primary method used to address research question #3: funding adequacy. Using the same approach as a 2018 cost adequacy study conducted for the state of Kansas (Taylor, Willis, Berg-Jacobson, Jaquet, & Caparas, 2018), the research team used a stochastic frontier analysis to estimate an educational cost function for North Carolina. A cost function estimates the minimum cost necessary to achieve certain outcomes, given input prices and environmental factors.

The data used in this analysis came from administrative and public files of the NCDPI, including data housed and maintained by the Duke University North Carolina Education Research Data Center. Publicly available data from the National Center for Education Statistics, the U.S. Bureau of Labor Statistics, the U.S. Department of Housing and Urban Development, and the U.S. Census Bureau were also used in the analysis. The analysis covered the five-year period from 2012–13 through 2016–17.

It should be noted that the analysis uses a constructed measure of operating expenditures, which excludes some categories of expenditures not considered to be operating expenditures. These excluded categories include debt service; construction expenditures; fund transfers; food services; judgments and settlements against the district; transportation services; tuition- or fee-funded programs (e.g., before- and after-school care, preschool); ancillary services; payments to other government units except indirect costs; and nonprogrammed charges. Furthermore, preschool expenditures were excluded due to inaccessibility of complete financial data for these grades. Charter schools were excluded because their operating expenditures may have cost structures different from those of traditional schools; also excluded were a handful of special schools with no spending data provided. These exclusions amounted to approximately 425 schools across all years of data. Therefore, the expenditures reported represent K–12 operating expenditures in traditional school buildings.⁴ These exclusions should be noted when reviewing the cost estimates reported in this summary.

Findings

Inequitable Distribution of Resources

North Carolina's allotment system includes several allotments designed to distribute additional funds for higher-need student populations and/or to address regional cost differences (see Exhibit A4).

⁴ Due to missing data, the analysis sample excluded approximately 50 additional schools.

Exhibit A4. Allotments intending to address inequities

Allotment category	% FY 2019 allotment funds	Additional \$ per pupil
Disadvantaged students	0.7%	49.48
At-risk students	2.7%	190.38
English learners	0.8%	57.12
Exceptional children	8.2%	573.35
Low-wealth counties	2.2%	154.79
Small counties	0.4%	29.41

Source: DPI 2018–19 Year-to-Date State Allotment Data

Note: Updated as of May 20, 2019.

Nevertheless, during the needs assessment, many district CFOs described inequities in North Carolina’s finance system. However, not all CFOs described the funding system as inequitable. Many of those who described the funding system as equitable — or noted that the structure could theoretically be equitable — referred to the allotments that intend to provide additional resources to higher-need students. Several CFOs reported that although these allotments help, they are underfunded.

Furthermore, CFOs identified the system’s overall inadequate funding as a contributor to inequity. For example, one CFO noted that funding is currently insufficient for materials, so some districts ask parents or the community to contribute funding for school supplies. Parents in high-poverty areas cannot afford to make these contributions, adding to inequities in funding.

Across the three study methods, the statewide distribution of funding was found to be inequitable in two key ways: (1) school districts lack the funding necessary to meet the educational needs of historically underserved student populations, and (2) funding across districts is inequitable due to differences in local funding, differences in state funding received through the Classroom Teacher allotment, and differences in regional costs.

Specific student populations need higher levels of funding

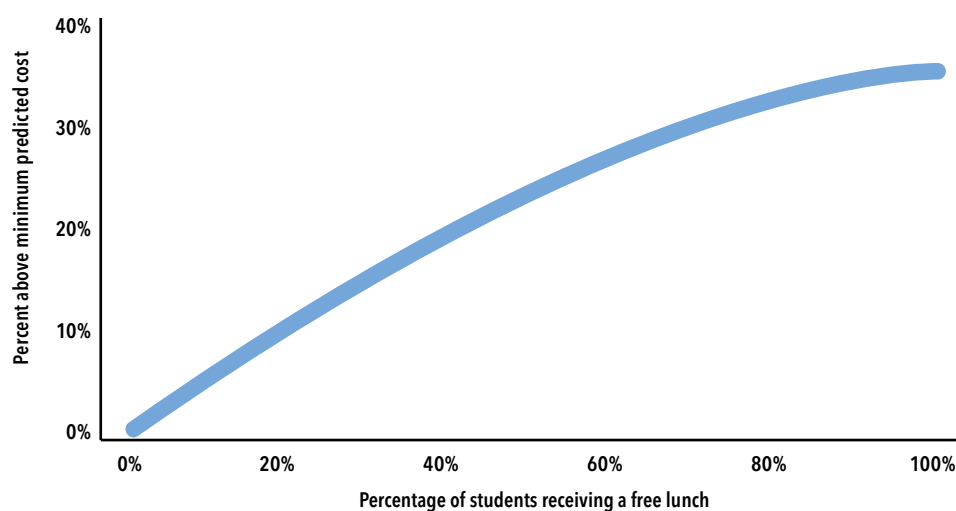
Consistent with prior research (Duncombe & Yinger, 2004; Taylor, Willis, Berg-Jacobson, Jaquet, & Caparas, 2018), the education cost function analysis indicated that more funding is required to produce the same outcomes for student populations with greater needs (e.g., English learners, economically disadvantaged students, exceptional children). The analysis found that as the school-level percentage of economically disadvantaged students (defined here as those eligible for free lunch⁵) increases, the cost to achieve the same academic growth goes up, holding all other cost factors constant. For example, if we take School A with a population comprised of

5 In the professional judgment panels, economically disadvantaged students were defined as those eligible for free or reduced-price lunch, whereas in the cost function analysis, economically disadvantaged students were defined as those only eligible for free lunch. This was necessary because the research team views free-lunch eligibility as less sensitive to the impact of the Community Eligibility Program and sees the National Center for Education Statistics (NCES) Common Core of Data as the source of data with the most consistently applied rules of aggregation. Based on NCES FY 2016 data, 57% of North Carolina public school students were eligible for free or reduced-price lunch, whereas 53% were eligible for free lunch.

60% economically disadvantaged students, and compare with to School B with a population of 90% economically disadvantaged students, the predicted cost per pupil to ensure those students reach the same performance level will be greater in School B than in School A. The analysis found that at the highest concentrations of economically disadvantaged students, the per-pupil costs flatten out. Exhibit A5 illustrates these findings.

The high per-pupil costs associated with serving high concentrations of economically disadvantaged students affects a substantial proportion of North Carolina schools; approximately 31% of schools in the state are serving student populations in which more than 90% of students are economically disadvantaged.

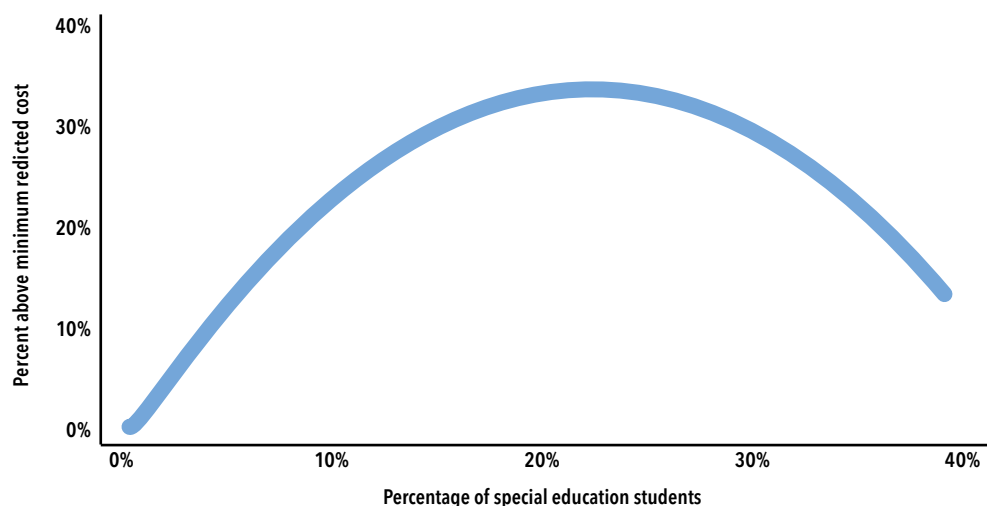
Exhibit A5. Costs of educating students in poverty



Note: The thick blue line reflects the per-pupil cost predicted by the model, illustrating costs as the population grows. The green line represents the percent of schools at each point in the distribution of the student population.

With respect to exceptional children, as the school-level percentage of students in this population increases, the supplemental cost to achieve the same academic growth goes up, but only up to a point. This suggests that schools with high concentrations of exceptional children have developed an infrastructure for serving these students efficiently; as a result, each additional student adds less and less to the total cost, and, eventually, per-pupil costs go down. Exhibit A6 illustrates this finding, displaying the predicted cost as the percentage of exceptional children increases.

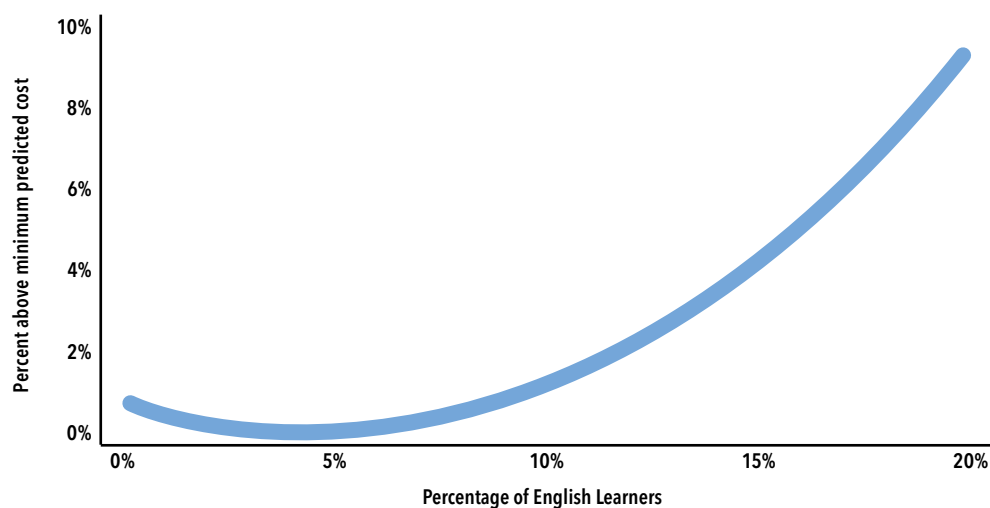
Exhibit A6. Costs of educating exceptional children



Note: The thick blue line reflects the per-pupil cost predicted by the model, illustrating costs as the population grows. The green line represents the percent of schools at each point in the distribution of the student population.

Finally, the research team examined the impact on costs of the district-level population of English learners. As the percentage of students in this population goes up, the cost to achieve the same academic growth also goes up. Unlike economically disadvantaged students and exceptional children, as the concentration of English learners increases, the marginal costs generally get larger. At very low concentrations, there is a dip in costs, which likely reflects the impact of the shock of initial investment in new services for the first few English learners. Exhibit A7 illustrates the costs of educating English learners, displaying the predicted cost as the percentage of English learners increases.

Exhibit A7. Costs of educating English learners



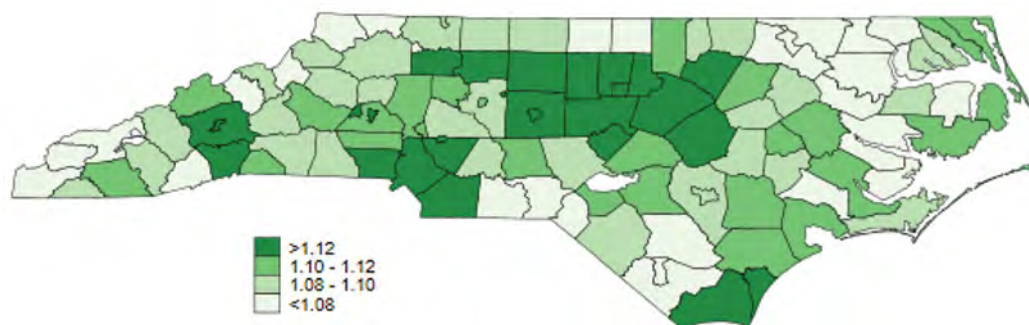
Note: The thick blue line reflects the per-pupil cost predicted by the model, illustrating costs as the population grows. The green line represents the percent of schools at each point in the distribution of the student population.

Similarly, the PJPs consistently noted that additional resources are necessary to adequately serve students with greater needs. These resources included, for example, resources to support additional wraparound services (e.g., counselors, social workers) and interventions (e.g., extended learning time, reading and math interventionist staff) for economically disadvantaged students.

Regional variations in costs impact funding needs

The education cost function analysis also found that all else being equal, the cost of educating students in some regions of the state is higher than in others, primarily due to regional cost factors (e.g., cost of living, local amenities) that impact labor costs. In the model, this was measured by a teacher salary cost index that captures the regional variation in teacher salaries due to factors beyond district control. The district-level salary indices range from a low of 1.00 to a high of 1.21, indicating that the cost of employing teachers is 21% higher in some parts of North Carolina than it is in others. Exhibit A8 displays the geographic variation in an average district-level salary index.

Exhibit A8. Map of average district-level North Carolina salary index, 2016–17



As displayed in Exhibit A8, the more costly districts are those clustered around the urban centers of the state, including Winston-Salem, Raleigh-Durham, and the interstate corridor between them; the Charlotte metropolitan area; the Asheville metropolitan area in western North Carolina; and along the coast near Wilmington.

In addition to increased labor costs, there is also regional cost variation in nonlabor resources. These costs were found to be higher (1) the closer a school is to a major metropolitan area (primarily urban areas), (2) in very rural areas, and (3) in coastal communities.

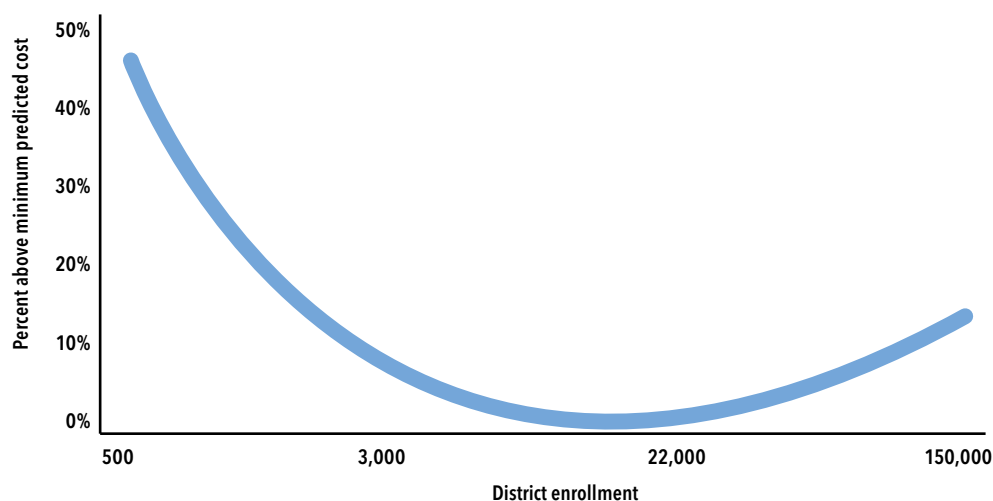
Scale of district operations impacts costs

An observed trend in economic literature is that as organizations produce more units, their marginal costs (i.e., the cost of producing each unit) tends to go down except at a very large scale of production (Silvestre, 1987; Canback, 1998). This is often described by a concept known as “economies of scale,” which refers to the notion that as an organization grows in size, it is able to produce more efficiently, and thus its marginal costs to produce each additional unit tend to decline. The exception occurs when production gets to an extremely large scale. At this point, due to the inherent cost of managing the scale of operation, marginal costs increase again (referred to

as “diseconomies of scale”). Previous research has confirmed that diseconomies of scale occur within very large public school districts (Robertson, 2007).

The cost function results suggest that this concept applies to public school district operations, as does previous research (Augenblick, Myers, & Silverstein, 2001; Andrews, Duncombe, & Yinger, 2002). As the number of students goes up, the marginal cost to produce the same academic growth goes down except in very large school districts, where the marginal costs begin to creep up again. This finding is illustrated in Exhibit A9.

Exhibit A9. Cost to achieve equivalent outcomes as district enrollment increases



Note: This exhibit shows the log of district enrollment, as opposed to enrollment without transformation. Consequently, the results in the chart illustrate exponential changes in enrollment as equivalent distances on the x-axis (e.g., 8 = ~3,000, 9 = ~8,000, 10 = ~22,000, etc.).

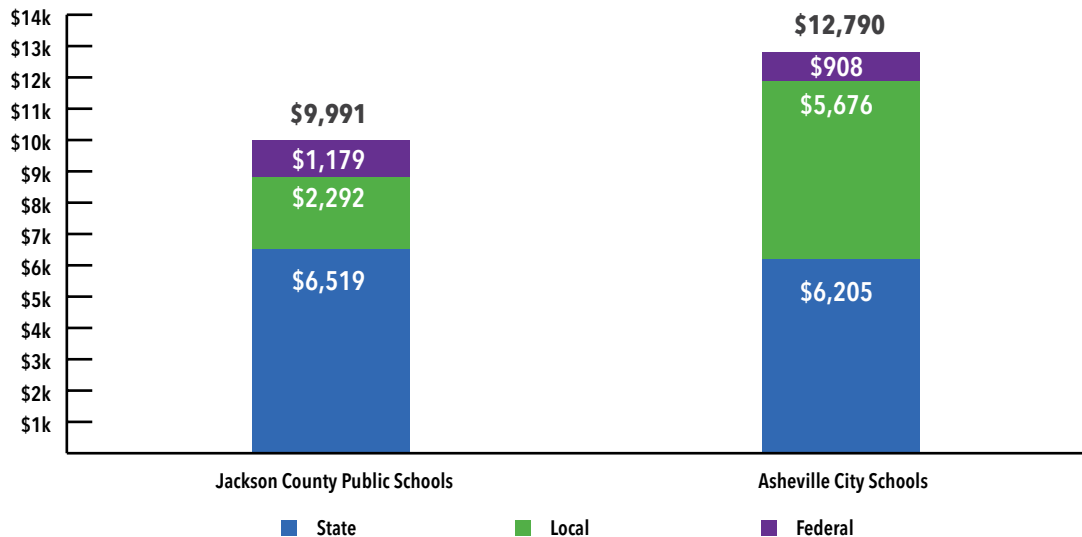
This finding does not suggest a specific policy direction for the state about the organization and appropriate size of school districts. Rather, it indicates that in North Carolina, the relationship between the scale of district operations and per-pupil cost is consistent with previous research findings, and the state should consider this factor when funding and supporting districts to deliver services for students.

Additional inequities exist due to local funding and Classroom Teacher allotments

District CFOs noted that inequities based on local wealth also present a challenge for lower-wealth districts. This finding is corroborated by prior research. For example, the Public School Forum found a gap of more than \$2,400 per student between the state’s 10 counties that spent the most in local contributions per student and the 10 counties that spent the least (Public School Forum of North Carolina, 2019). During this study’s needs assessment, CFOs reported difficulty recruiting teachers and central office administrators due to competition with wealthier districts. One CFO reported a district just a half-hour drive away could offer teachers a 25% higher salary due to its local supplement. Exhibit A10 illustrates the difference in per-pupil funding between two nearby districts with similar student enrollment: Asheville City Schools and Jackson County Public Schools. Asheville City

Schools receives \$5,676 in per-pupil local funding, nearly 2.5 times as much as Jackson County Public Schools' \$2,292 in per-pupil local funding, and receives approximately 28% more in total per-pupil funding.

Exhibit A10. Disparity in funding between two nearby districts of similar size



Source: DPI Statistical Profile — Table 24 (2018)

Not only does local funding create a major funding disparity between these two districts, but the district receiving fewer funds has greater levels of student need, as indicated in Exhibit A11. Thus, although this district requires higher funding levels to serve its students — as indicated in the cost function analysis results — the state funding system leaves it with less funding than neighboring, wealthier districts with lower levels of student need, with whom the district must compete for qualified teachers and other staff.

Exhibit A11. District with lower funding levels serving students with higher levels of need

	Jackson County Public Schools	Asheville City Schools
Total enrollment	3,772	4,558
% economically disadvantaged (eligible for free lunch)	57%	37%
% English learners	4%	2%
% exceptional children	14%	12%

Source: National Center for Education Statistics, Common Core of Data, 2017

In addition to the funding disparities due to local supplements, the analysis of public year-to-date allotment data shows inequities in North Carolina's allotment system through the Classroom Teacher position allotment. With the position allotments, districts can hire teachers of any experience level — therefore commanding any salary on the state salary schedule — and the state will fund the position. However, prior research suggests higher-qualified, more experienced teachers may disproportionately choose to work for more affluent districts,

a phenomenon known as “teacher sorting,” resulting in additional state funding through the Classroom Teacher allotment (Program Evaluation Division, North Carolina General Assembly, 2016).

This study’s analysis found a positive and statistically significant correlation between per-pupil district wealth (as measured by the adjusted property tax base) and per-pupil funding received through the Classroom Teacher allotment.⁶ This indicates that wealthier districts receive, on average, more funding through the Classroom Teacher allotment than less wealthy districts. Thus, the Classroom Teacher allotment packs a double punch in reducing the equity of funding distribution, as higher-need students — who are disproportionately served by less-wealthy districts — need higher levels of funding than wealthier districts.

Nevertheless, CFOs interviewed for the needs assessment were largely positive about the position allotment, noting that position allotments enable school leaders to hire teachers based on their qualifications, rather than on budgetary impact. Although the state salary schedule requires that more experienced and more highly credentialed teachers are paid more than newer teachers, the position allotment system enables school leaders to hire the best candidates they can find — even if the teacher has many years of experience and thus commands a higher salary — with the assurance that the state will fund the position.

The Classroom Teacher allotment, which covers teacher salaries and benefits, is the largest state allotment to school districts, representing 42% of funding for school districts in the 2017–18 school year (North Carolina Department of Public Instruction, 2017). Thus, inequitable distribution of funding through this allotment can have a major impact on district budgets and reduces the alignment of allocating resources to students of most need.

Alignment

In both the needs assessment and the PJPs, practitioners consistently reported that the structure of North Carolina’s current finance system hinders schools’ and districts’ ability to effectively and efficiently align resources with student needs. During the needs assessment, lack of flexibility in how to spend state funds was the most frequently cited obstacle in aligning funding with student needs; in addition, CFOs noted the challenge posed by a lack of finance system stability due to frequent changes in allowed uses of funds.

New constraints on local flexibility hamper efforts at alignment

During the needs assessment, district CFOs reported that restrictions on the allowable uses of allotments, along with new restrictions around the Classroom Teacher allotment, hamper their ability to align funding to student needs. The analysis indicated that in 2010–11, allotments with substantial flexibility represented roughly three quarters of K–12 state funding. By 2018–19, allotments with substantial flexibility represented only about

⁶ This study’s analysis was a replication of a prior analysis conducted by the North Carolina General Assembly (2016), using publicly available FY16 data. As in the original analysis, city school districts could not be included, as adjusted property tax base is a county measure. This study also omitted the 11 county districts that have city districts within their borders, as county adjusted property tax bases may not be an accurate measure of local wealth for these districts. Omission of these additional 11 districts did not significantly change the results.

one fifth of K–12 state funding.⁷ This finding corroborates North Carolina’s Program Evaluation Division 2016 report, which found that the system’s local flexibility has been drastically reduced in recent years. The report notes the General Assembly’s new restrictions on various allotments, including the Teacher Assistants, Exceptional Children, Academically or Intellectually Gifted, and Textbook allotments.

When funds are restricted to a particular use and cannot be transferred, district leaders’ ability to make decisions about how to allocate resources to make the greatest impact on student outcomes is reduced. For example, starting in July 2018, Textbook allotment funds could no longer be used for purchases of items other than physical textbooks and digital resources. Previously, many schools used those funds for other learning tools, such as digital learning devices. Although CFOs and professional judgment panelists identified technology as a critical investment, the state does not allocate separate funding for technology, leading several CFOs to identify this as an important instructional resource that districts struggle to provide for their students.

Restrictions on Classroom Teacher allotments reduce flexibility and funding levels

Several CFOs reported that recent restrictions on transferring funds from the Classroom Teacher allotment presented a particularly significant challenge, reducing districts’ funding flexibility, creating inequities, and reducing some districts’ overall funding. Prior to the 2012–13 school year, districts could transfer Classroom Teacher allotment funds to another area at the statewide average teacher salary level. That is, they could choose to hire one fewer classroom teacher through the Classroom Teacher allotment and could instead receive funds, equal to the statewide average teacher salary, which could be spent in any other allowable area (North Carolina State Board of Education & Department of Public Instruction, 2016). Districts would then use funding from one of their other allotments to hire a teacher commanding a lower salary. However, districts can now transfer these funds only at a starting teacher salary level,⁸ rather than the average salary. As one CFO described, because their district is unable to recruit more experienced teachers, they forgo potential state dollars — almost \$1 million for their district in FY 2018. Although the state allots funds for each district to receive a Classroom Teacher allotment that reflects the statewide average, if districts cannot recruit teachers who command salaries at the statewide average or higher, then the difference in allotted funds reverts back to the state budget. Because lower-wealth districts hire lower-paid teachers on average, this leads to even greater inequity.

Frequent changes in funding regulations hamper budget planning

District CFOs described how the unpredictability of funding regulations from year to year has created instability in the system and limits their ability to do longer-term budget planning. As one CFO explained, “The flexibility that we have in our use of funding varies from year to year depending on what the legislature is trying to prioritize that year, and it can vary wildly.” CFOs reported that frequent legislative changes in the allowed use of funds make long-term planning extremely difficult.

7 In this analysis, “substantial flexibility” means the ability to transfer funding from one allotment category to another without a substantial reduction in the funding amount. (For example, the Classroom Teacher allotment no longer has substantial flexibility because the funding amount is reduced to the starting salary level when it is transferred.)

8 The first step of the “A” teacher salary schedule.

Funding amount stable from year to year, but state budget timeline and adjustments create instability

Because district funding is based on enrollment (average daily membership, or ADM), most CFOs described their year-to-year funding amount as fairly stable or at least predictable. However, CFOs reported that the state's process for finalizing each district's budget, which involves adjustments after the school year begins, creates instability for budget planning.

As a focus group of CFOs explained, building the next year's budget may begin in December or January, and districts must submit their budgets to the county commissioner for review by the spring or even as early as February. However, the state's timeline begins much later, with the budget passed in the summer or, if the legislation is delayed, as late as the fall. Furthermore, districts' budgets are adjusted based on their actual ADM counts from the first month of attendance as well as on the actual ADM from charter schools in their county.

Districts whose ADM is higher than projected must wait until they receive their additional funding to hire the additional teachers necessary to keep class sizes within the state-mandated student-teacher ratios. Conversely, for districts whose ADM is lower than projected, state allocations may not support all of the staff that they have hired for the current year, leaving those districts with the challenge of finding other funds to fill the gap.

CFOs also reported that the state's frequently changing, overly complicated funding system required them to spend a disproportionate amount of time ensuring that their budgets were in compliance with state regulations. CFOs also identified the transfer of funding from districts to charter schools as a particularly unnecessary administrative burden that obstructs their budget forecasting and planning process. CFOs consistently expressed a desire for the state to fund charter schools directly and "keep us out of the middle of it."

Strategic implementation of system changes promote resource alignment

Professional judgment panelists and CFOs noted that for system adjustments and new state investments to be effective, they should be implemented strategically. Panelists were fairly consistent in their recommendation that investments be phased in over as short a timeline as possible (i.e., within three to five years) and that new funding should be announced well in advance. As one panelist noted, it may be unrealistic to expect districts to allocate new funding strategically if they lack sufficient notice.

Panelists generally identified staffing-related investments as the highest priority at the local level, noting that effective use of nonlabor resources largely relied on staff capacity. For example, investments in classroom technology would be most effective when paired with the hiring of a technology specialist and with professional development to utilize this technology. Panelists also suggested prioritizing investments for early grades, as the benefits would follow these students as they continue into later grades. However, professional judgment panelists and CFOs overwhelmingly emphasized that given the large variation in local circumstances, districts should be given maximum flexibility to align new funds with local needs.

Regarding accountability, panelists recommended that the state require schools to demonstrate how their spending aligns with data-driven school improvement goals, using locally determined measures. Panelists

emphasized the need for multiple measures that capture the full range of desired outcomes mandated by *Leandro* and asserted that the common measures (e.g., state tests, graduation rates) were insufficient on their own.

Finally, in terms of adjusting the state's finance structure, CFOs voiced concern that consolidating allotments would make it easier for the state to cut funding, undermining any other funding system improvements. As one CFO noted, "I know that there is discussion about going to some kind of block grant, and the fear with that is, that tends to lead to cuts to funding. When we speak with other states, whenever [they] get this big consolidated block grant-type funding, they've seen cuts." Overall, CFOs expressed cautious ambivalence about changes to the finance system's structure. As one stated, "[It's a] double-edged sword; it could help, but it could also hurt if it's not managed correctly."

Adequacy

Neither the Supreme Court of North Carolina (the Court) nor the legislature has specifically determined the student performance thresholds (e.g., statewide graduate rates, statewide percentages of students meeting state standards in English Language Arts and Math) that would indicate adequate achievement of a sound basic education. Consequently, this study includes a range of options and perspectives in defining what adequate funding should be. In the needs assessment and PJPs, practitioners based their definitions of adequacy on their experiences as practitioners. Meanwhile, the cost function analysis provided cost estimates based on multiple illustrative scenarios that the state could use in determining adequacy.

There is inadequate funding to meet student needs

The cost estimates for operating expenditures of K–12 schools and districts were constructed observing that (a) there are students who currently are not performing as well as other students in the state and therefore require **short-term investment** supports to accelerate their growth, (b) an **ongoing investment** is necessary to maintain the level of student performance commensurate with the rulings of *Leandro*, and (c) investments in other areas of public education — namely, early childhood education and state-level investments — are vital in achieving the modeled student outcomes. For example, state-level investments will be needed to ensure sufficient pipelines of effective teachers and principals, to revise the state's assessment and accountability system, and to create a statewide system of support. The cost estimates presented below **do not** include associated costs for early childhood education or any of the other suggested state-level investments, which are presented for further discussion in the Overview of Investment and Sequence of Activities section.

Using the most recent information provided by the state for the 2016–17 fiscal year (FY17), Exhibit A12 displays total and per-pupil operating expenditures. The state's traditional public schools had \$12.16 billion in operating expenditures, about \$8.3 billion of which was provided by state funds. This amounts to \$8,346 per pupil, of which \$5,690 per pupil was provided by the state, on average. Exhibit A12 provides a further breakdown of operating expenditures, which can be used as a comparison to the cost estimates in the next section.

Exhibit A12. Operating Expenditures, FY17

	Total spending (in billions)	Average per-pupil spending
State	\$8.29	\$5,690
Local	\$2.78	\$1,911
Federal and other	\$1.09	\$745
Total	\$12.16	\$8,346

Note: Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics cost price index (CPI) calculations over the period July 2017 to July 2019.

Short-term and ongoing investment scenarios based on performance threshold assumptions

Recognizing that some students are not currently performing at grade level and will need additional support to achieve that level, the cost model estimated how much additional funding will be needed to raise the achievement of lower-performing students to meet state standards. To do so, the cost model produced three different scenarios for the necessary *short-term investments* and two scenarios for the necessary *ongoing investments*, thereby producing a range of cost estimates. In presenting various short-term and ongoing scenarios, this study intends to provide the state’s lawmakers with options to use as they deliberate on the best course of action when considering the distribution, alignment, and adequacy of funding for K–12 operating expenditures.

In constructing the cost estimates, it is assumed that both types of investments — short-term and ongoing — are coordinated to achieve the desired result of *providing all students with the opportunity for a sound basic education*. Such coordination requires that the state and districts create monitoring tools as well as support mechanisms to ensure that current and any future investments are used the most effectively. It also requires that implementation occurs over time, providing districts and schools with the opportunity to plan for the necessary changes in their systems. For purposes of these scenarios, implementation of these investments is presumed to span eight years, which coincides with the timeline identified in the North Carolina Every Student Succeeds Act (ESSA) plan.⁹

The short-term investment scenarios represent the support necessary for performance **gap reduction** between lower-performing students and their higher-achieving peers. These investments are meant to support changes in the public school system that permanently alter structures to enable all students to meet the standard of the *Leandro* ruling of a “sound basic education.” Meanwhile, the ongoing investment scenarios represent funding levels that would help **maintain** the average annual growth of students so that North Carolina’s education system can remain in compliance with the obligations of *Leandro*.

9 State of North Carolina. May 29, 2018. ESSA Consolidated State Plan. Submitted to the U.S. Department of Education. <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>

Short-term investment scenarios

In the first (Short-term A) and second (Short-term B) scenarios, all students are projected to achieve average annual grade-level growth except students in schools that are not currently meeting proficiency targets. The students not meeting the targets are assigned growth levels that would enable them to achieve proficiency as defined by North Carolina's current ESSA plan.¹⁰ Under this plan, the state is aiming for proficiency levels of 74.1% in Grades 3–8 Math and 73.3% in High School Math by 2027. For English Language Arts (ELA), the targets are 65.8% in Grades 3–8 Reading and 71.3% in High School Reading by 2027.

Notably, this plan and the associated proficiency targets are regarded as not meeting a sufficient level of rigor as reviewed by independent reviewers (Aldeman, Hyslop, Marchitello, Schiess, & Pennington, 2017). Achieving the ESSA plan goals for 2027 (modeled in Short-term A and Short-term B) would substantially reduce gaps, but it would not completely eliminate gaps between students in the highest- versus lowest-poverty schools; therefore, it would not achieve the full standard set out by the *Leandro* rulings. However, the scenarios offer a starting point for discussion among decision-makers, using the state's own documented goals for student performance.

The scenarios of Short-term A and Short-term B vary in how they simulate a school's improvement implementation. First, both scenarios identify the schools that are not achieving the proficiency rates of the state's ESSA plan by comparing each school's current proficiency rates on ELA and Math with statewide targets. Then, each identified school's students are ranked from nearest to farthest from the standard for proficiency. The following steps are where the two scenarios differ.

The scenario in Short-term A applies a growth rate to those students between approximately the 25th and 75th percentile that would enable them to achieve proficiency. All other students currently not meeting proficiency would achieve average annual growth. This simulates a practical expectation — and observable past behavior of school improvement implementation — in that most schools will provide support to students in groups, rather than developing individual intervention plans for each student.

Alternatively, the scenario in Short-term B applies the necessary growth rate to the lowest-performing student in the school to reach proficiency. This is followed by the second-lowest-performing student and so on, until the overall proficiency rate for the school hits the state-identified target. This simulates a different school improvement approach in which students would more likely need more individualized approaches to ensure that their performance level increases at the desired rate.

When comparing these first two short-term scenarios, Short-term B is more expensive than Short-term A. This is primarily because a greater amount of support is necessary to bring the lowest-performing student to proficiency, as compared with a student who is closer to the standard of proficiency. This also explains why the overall proficiency rates achieved in Short-term B are very slightly lower than in Short-term A. In addition, on average, it costs more for the lowest-performing students to achieve each percentage point of growth compared with other students. Exhibit A13 presents the performance and cost estimate results from Short-term A and Short-term B and also includes the differences in performance of the highest- and lowest-poverty schools. These cost estimates are assumed to be implemented over an eight-year period.

¹⁰ State of North Carolina. May 29, 2018. *ESSA Consolidated State Plan*. Submitted to the U.S. Department of Education. <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>

Exhibit A13. Comparison of Short-term A and Short-term B scenarios phased in over an eight-year period

	Current	Short-term A: 25th–75th Percentile to Proficiency	Short-term B: Lowest-Achieving Students to Proficiency
Estimated State Spending (in billions)	n/a	\$1.58	\$2.33
Per-Pupil Cost Estimate	n/a	\$1,087	\$1,599
Statewide ELA Proficiency (%)	58.9	68.3	68.1
Statewide Math Proficiency (%)	52.4	75.3	74.8
High-poverty Schools ELA Proficiency (%)	43.8	65.6	64.9
High-poverty Schools Math Proficiency (%)	42.4	74.5	73.7
Low-poverty Schools ELA Proficiency (%)	79.1	80.6	80.1
Low-poverty Schools Math Proficiency (%)	81.8	78.6	78.6

Notes: Overall Subject-Level Proficiency includes grade levels 4–9 (Math) and 4–8 and 10 (ELA). High-poverty schools (n=825) are defined as those serving a population of 75% or more students that qualify for free or reduced-price lunch. Low-poverty schools (n=182) are defined as those serving a population of 25% or less students that qualify for free or reduced-price lunch. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Short-term A is an additional \$1.58 billion investment, or approximately \$1,087 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$198 million per year, or \$136 per pupil per year. The cost associated with Short-term B is an additional \$2.33 billion investment, or approximately \$1,599 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$291 million per year, or \$200 per pupil per year. A large portion of these dollars would be allocated to schools and districts serving students in high-poverty settings.

In the last scenario (Short-term C), the performance threshold is grounded in the Court’s *Leandro* ruling. The October 12, 2000 Memorandum of Decision (p. 183) notes: “Every school in North Carolina is capable of having 90 percent of its students score at proficient levels.” Consequently, Short-term C replicates the design of Short-term B, in which the lowest-performing students experience targeted growth, but the school-level proficiency thresholds are increased to 90% of students for all subjects and grade levels. Nonproficient students who are not elevated to reach proficiency goals achieve average grade-level growth. Exhibit A14 presents the performance and cost estimate results from Short-term C and includes the differences in performance of the highest- and lowest-poverty schools. These cost estimates are assumed to be implemented over an eight-year period.

Exhibit A14. Short-term C scenario over an eight-year period

	Current	Short-term C: <i>Leandro Compliant</i>
Estimated State Spending Less Ongoing A (in billions)	n/a	\$3.16
Per-Pupil Cost Estimate	n/a	\$2,170
Statewide ELA Proficiency (%)	58.9	91.5
Statewide Math Proficiency (%)	52.4	90.9
High-poverty Schools ELA Proficiency (%)	43.8	90.0
High-poverty Schools Math Proficiency (%)	42.4	90.2
Low-poverty Schools ELA Proficiency (%)	79.1	91.9
Low-poverty Schools Math Proficiency (%)	81.8	91.7

Notes: Overall Subject-Level Proficiency includes grade levels 4–9 (Math) and 4–8 and 10 (ELA). High-poverty schools (n=825) are defined as those serving a population of 75% or more students that qualify for free or reduced-price lunch. Low-poverty schools (n=182) are defined as those serving a population of 25% or less students that qualify for free or reduced-price lunch. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

The cost associated with Short-term C is an additional \$3.16 billion investment, or approximately \$2,170 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$395 million per year, or \$271 per pupil per year.

Ongoing investment scenarios

Under *Leandro*, the Court affirmed that local education agencies (LEAs) are “entitled to funding by the state sufficient to provide all students, irrespective of their LEA, with at a minimum, the opportunity to obtain a sound basic education” (*Hoke County Board of Education v. State*, 2004). The “minimum standard” specified under this approach, for which the state is responsible, includes ensuring that all students achieve average annual growth over one year of instruction.

The first ongoing investment scenario (Ongoing A) focuses on estimating the minimum expenditure each district needs in order to achieve the state average level of annual academic progress. The second ongoing investment scenario (Ongoing B) recognizes that most students in some districts already outperform the standard, as do some students in even the lowest-performing districts. Under this “leveling-up” scenario, the study estimated the funding required to ensure that each individual student achieves at least average annual growth, without any reduction in achievement by students already performing at or above average. The difference between Ongoing A and Ongoing B would represent the additional spending required to maintain the academic growth of students already performing at or above average.

The cost associated with Ongoing A is an additional \$3.7 billion investment, or approximately \$2,540 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$463 million per year, or \$318 per pupil per year.

The cost associated with Ongoing B is an additional \$3.78 billion investment, or approximately \$2,598 per pupil on average. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$472.5 million per year, or \$325 per pupil per year.

Although Ongoing A and Ongoing B are each presented as an investment over eight years to match the short-term investment models, in practice, they represent ongoing annual investments. Unlike the short-term investments, which would be completed after eight years and are modeled as a *supplement* to ongoing funding, the annual ongoing investment would need to continue indefinitely.

Exhibit A15. Comparison of Current Spending versus Ongoing A

	Current	Ongoing A	Difference	% Difference
Total State Spending (in billions)	\$8.29	\$11.99	\$3.70	44.6%
Per-Pupil Cost Estimate	\$5,690	\$8,230	\$2,540	

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as “inefficient” by the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

Exhibit A16. Comparison of Current Spending versus Ongoing B

	Current	Ongoing B	Difference	% Difference
Total State/Local Spending (in billions)	\$11.08	\$14.86	\$3.78	34.1%
Per-Pupil Cost Estimate	\$7,601	\$10,199	\$2,598	

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as “inefficient” by the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

Sum of state funding under Ongoing A and Short-term C scenarios: The combined investment scenario most closely tied to *Leandro* ruling

As noted earlier, neither the Court nor the legislature has specifically identified a set of student performance outcomes to use as a functional definition for a “sound basic education” for the purposes of this cost adequacy study. However, given that the Court’s October 12, 2000 Memorandum of Decision did specifically assert that each school is capable of having 90% of its students meet proficiency standards, Short-term C represents the statewide target proficiency rate most closely tied to the *Leandro* ruling. As for the ongoing scenarios for maintaining student growth, given that the Court held that the state constitution does *not* require that “substantially equal educational opportunities beyond the sound basic education mandated by the Constitution must be available in all districts” (*Leandro v. State*, 1997), it could then be argued that the state has no obligation to maintain

the growth of students performing above average, in which case Ongoing A may be more clearly tied to the *Leandro* obligation than Ongoing B.

Accordingly, Exhibit A17 displays the sum total of Short-term C and Ongoing A as additional investments relative to the state's current investment in public education.

Exhibit A17. Ongoing A and Short-term C implemented over an eight year period

	Sum Total (in billions)	Sum Total per Pupil	Total per Year (in billions)	Average per Pupil per Year
Current State Spending	\$8.29	\$5,690		
Ongoing A Scenario	\$3.70	\$2,540	\$0.46	\$318
Short-term C Scenario	\$3.16	\$2,170	\$0.39	\$271
Ongoing A + Short-term C	\$6.86	\$4,710	\$0.86	\$589

Note: Includes efficiency adjustment to account for the average 6.3% of funds identified as not contributing directly to the outcomes incorporated into the model. Dollar values adjusted for inflation to 2019 dollars using the Bureau of Labor Statistics CPI calculations over the period July 2017 to July 2019. These figures would need to be further adjusted for inflation over the next eight years.

Other factors that influence the effectiveness of additional investments

As is clear from the findings displayed in Exhibit A17, the cost function analysis found the current level of state spending to be inadequate based on the minimum standard of average annual academic growth and for accelerating underperforming students to proficiency. Notably, these simulations model the previously identified assumptions about student growth and the attainment of schools' overall proficiency rates. Important also in the context of this modeling is that the choices of policymakers and practitioners about the use of these resources and the resulting outcomes for students cannot be observed. This fact reinforces the importance of ensuring that the state act upon the findings and recommendations in this section and the report overall as a means to leverage evidence-based practices that help ensure resources are used effectively to meet the standard of student outcomes identified in the *Leandro* ruling. Research and experience indicate that increased spending alone will not produce improved student outcomes without attention to how the resources are distributed and used.

Important resource allocation priorities were identified as underfunded

In addition to the study's finding that overall per-pupil state funding is inadequate, data collected for both the PJPs and the needs assessment suggest that funding is also inadequate for specific resources. For example, across the three independent PJPs, a few broad resource allocation priorities were identified, including the provision of the following (not necessarily in order of priority):

- » A supportive school climate, including mental health supports and social-emotional learning

- » Access to adequate technology, to science, technology, engineering, and math classes, and to the preparation needed to contribute to the 21st-century workforce
- » Effective professional development and incentives to improve and maintain educator quality
- » Sufficient educator-to-student ratios to provide for an effective learning environment and differentiated instruction

As a component of these recommendations, all three panels recommended resources for elementary schools, middle schools, and high schools that go beyond what is typically provided to schools currently. Similarly, during the needs assessment interviews and focus groups, district CFOs consistently identified both the current overall funding level and the funding for specific resources and student populations as inadequate.

At the same time, CFOs expressed strong support for keeping the Classroom Teacher allotment as a position allotment. Among other reasons, CFOs noted that the costs of teacher benefits, such as health care and pensions, are rising and that position allotments protect districts from these rising costs. As such, the Classroom Teacher allotment can promote annual cost adjustments in funding for teacher compensation that help contribute to, if not achieve, funding adequacy. Although this study, as well as previous research, has found that the Classroom Teacher allotment is problematic due to its inequitable distribution of state funding, CFOs' concerns underscore the need for a funding system that continually accounts for rising staff costs.

Conclusions

Across all three study methods, some common needs and challenges emerged, as did best practices and potential opportunities. One overarching message was that *how* districts are allowed to invest funds is as critical as *how much* funding is provided. Specific, major themes are summarized below.

Equity of Distribution: More Funding Required by Students With Greater Needs Than by Others; Current Resource Distribution Inequitable

- » The cost function results indicate that additional spending is required to achieve the same student outcomes for economically disadvantaged students, English learners, and exceptional children, compared with other student populations. Regional cost differences also require additional spending.
- » Professional judgment panels recommended additional resources across numerous categories to meet the needs of economically disadvantaged students.
- » The needs-assessment findings suggest that local funds are too often required to fill a gap in what is provided by the state, disproportionately impacting low-wealth communities, where student needs are typically greater.
- » Disparities in state funding received through the Classroom Teacher allotment exacerbate inequities.

Alignment: Efforts to Spend Current Resources Effectively Stymied by Unpredictability and Increasing Restrictions on Funding Flexibility

- » Results from the professional judgment panels and needs assessment consistently emphasized the importance of funding flexibility for school leaders to determine the most effective allocation of resources at the local level.
- » Frequent changes in restrictions and requirements hinder districts' attempts at long-term strategic planning, ultimately impacting cost-effective spending.
- » Prioritizing new staffing and resources for early grades may provide the highest-impact investment of new resources, although this should ultimately be left up to local leaders.
- » Accountability structures should require the alignment of funding with data-driven school improvement plans, which can include locally determined measures (i.e., measures beyond standardized tests and graduation rates).
- » New investments should be phased in as soon as possible, and they should be announced with sufficient notice to enable districts to plan effectively.
- » District CFOs voiced concern that consolidating allotments would make it easier for the state to cut funding, leading to funding instability.

Adequacy: Minimum Required Investment Determined by Defining Desired Outcomes; Some Critical Educational Resources Currently Underfunded

- » The outcomes that the Court accepts as sufficient to meeting the state's obligation will determine the size of the state's investment. Achieving and maintaining these minimum student outcomes will require investments both to *accelerate* student growth for low-performing students as well as to *maintain* overall student growth.
- » A combination of Short-term C and Ongoing A scenarios would best represent meeting the standard of the *Leandro* ruling, both in regard to reducing gaps for the state's lower-performing students and maintaining such growth so that students achieve at grade level each year. The sum of these Short-term C and Ongoing A scenarios requires an additional \$6.86 billion investment, or approximately \$4,710 per pupil. If this amount were distributed equally over an eight-year period, it would mean an investment of approximately \$860 million per year, or \$589 per pupil each year.
- » Following this eight-year period, the necessary additional ongoing investment (Ongoing A) would be approximately \$463 million, or \$318 per pupil each year.
- » Professional judgment panels, as well as individual and focus group interviews, noted several critical, high-impact priorities that are currently either insufficiently funded or not funded at all.

Best Practices and Opportunities

- » Needs-assessment findings suggest that funding must be explicitly tied to real changes in prevailing costs (e.g., cost of living, teacher salaries) if the state wants to maintain current services, let alone expand them.
- » The cost function analysis suggests that current funding levels are inadequate and suggests possible funding levels based on various scenarios for improving student outcomes.
- » Alternative funding models, such as weighted student funding formulas, can more directly link funding levels with student need. In the immediate future, weightings can be added to position allotments or other allotments for higher-need populations.
- » Needs assessment findings suggest that restoring previous flexibility around allotment funding transfers can offer immediate relief for some of the fiscal pressures that districts are experiencing.

References

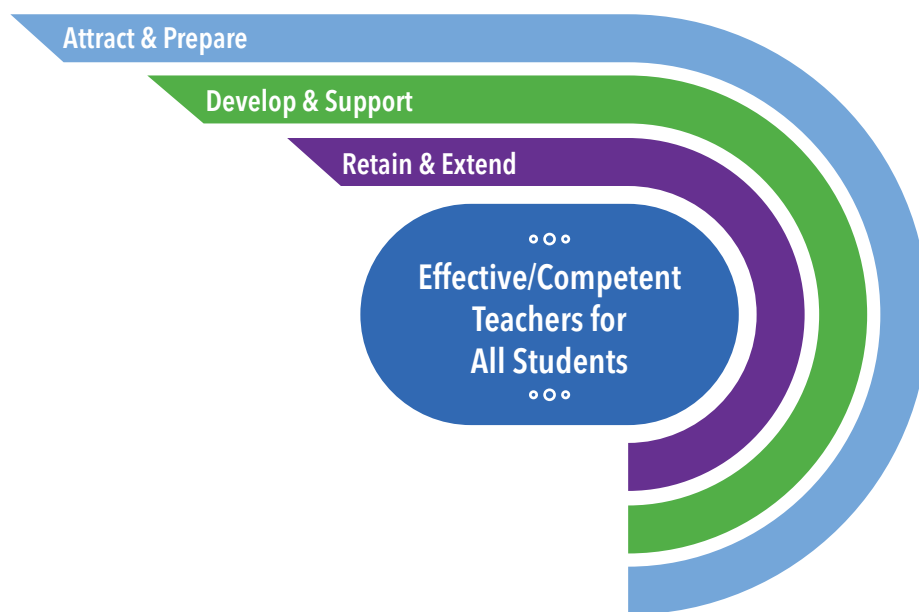
- Aldeman, C., Hyslop, A., Marchitello, M., Schiess, J. O., & Pennington, K. (2017). *An independent review of ESSA state plans*. Sudbury, MA: Bellwether Education Partners. Retrieved from <https://bellwethereducation.org/publication/independent-review-essa-state-plans>
- Andrews, M., Duncombe, W., & Yinger, J. (2002). Revisiting economies of size in American education: Are we any closer to a consensus? *Economics of Education Review*, 21(3), 245–262.
- Augenblick, J., Myers, J., & Silverstein, J. (2001). *A comprehensive study on the organization of Kansas school districts*. Prepared for the Kansas State Board of Education in response to RFP Number 00241. Topeka, KS: Augenblick and Myers.
- Baker, B. D., Farrie, D., & Sciarra, D. (2018). *Is school funding fair? A national report card*. Newark, NJ: Education Law Center. Retrieved from http://www.edlawcenter.org/assets/files/pdfs/publications/Is_School_Funding_Fair_7th_Editi.pdf
- Canback, S. (1998). Managerial diseconomies of scale: Literature survey and hypotheses anchored in transaction cost economics. *Industrial Organization* 9810001. Munich, Germany: University Library of Munich.
- Chingos, M. M., & Blagg, K. (2017). *Making sense of state school funding policy*. Washington, DC: Urban Institute. Retrieved from https://www.urban.org/sites/default/files/publication/94961/making-sense-of-state-school-funding-policy_0.pdf
- Duncombe, W. D., & Yinger, J. (2004). *How much more does a disadvantaged student cost?* Syracuse, NY: Center for Policy Research at Syracuse University. Retrieved from <https://surface.syr.edu/cgi/viewcontent.cgi?article=1102&context=cpr>
- Hill, P. T., Roza, M., & Harvey, J. (2008). *Facing the future: Financing productive schools*. Bothell, WA: Center on Reinventing Public Education. Retrieved from <https://www.crpe.org/publications/facing-future-financing-productive-schools>
- Hoke County Board of Education v. State, 95 CVS 1158 (2002) (*Hoke IV*).
- Hoke County Board of Education v. State, 358 NC (2004) (*Leandro II*) at 610.
- Leandro v. State, 346 NC 336, 488 S.E.2d 249 (1997) (*Leandro I*) at 255.
- Memorandum of Decision, *Hoke County Board of Education v. State* (Wake Co. Super. Ct., Oct. 12, 2000).
- North Carolina Department of Public Instruction. (2017). *Year-to-date allocation data*. Accessed October 18, 2018. Retrieved from <http://apps.schools.nc.gov/ords/f?p=144:1>
- North Carolina General Assembly. (2018). *The joint conference committee report on the base and expansion budget for Senate Bill 99*. Retrieved from https://www.ncleg.net/Sessions/2017/Budget/2018/conference_committee_report_2018_05_28.pdf
- North Carolina State Board of Education & Department of Public Instruction. (2016). *2016–17 allotment policy manual*. Raleigh, NC: Author. Retrieved from <http://www.ncpublicschools.org/docs/fbs/allotments/general/2016-17policymanual.pdf>
- Program Evaluation Division, North Carolina General Assembly. (2016). *Allotment-specific and system-level issues adversely affect North Carolina's distribution of K–12 resources: Final report to the joint legislative program evaluation oversight committee*. Raleigh, NC: Author. Retrieved from https://www.ncleg.net/documentsites/committees/BCCI-6685/Committee%20Meetings/11-1-17/PED%20Full%20Report%2011_1.pdf
- Public School Forum of North Carolina. (2019). *2019 local school finance study*. Raleigh, NC: Author. Retrieved from <https://www.ncforum.org/2019-local-school-finance-study>
- Robertson, F. W. (2007). Economies of scale for large school districts: A national study with local implications. *The Social Science Journal*, 44(4), 620–629.
- Silvestre, J. (1987). Economies and diseconomies of scale. In *The New Palgrave: A Dictionary of Economics* (2nd ed., pp. 80–84). London, England: Macmillan.
- Taylor, L., Willis, J., Berg-Jacobson, A., Jaquet, K., & Caparas, R. (2018). *Estimating the costs associated with reaching student achievement expectations for Kansas public education students*. San Francisco, CA: WestEd.
- U.S. Census Bureau. (2019, May 21). *Annual survey of school system finances*. Retrieved from <https://www.census.gov/newsroom/press-releases/2019/school-spending.html>
- Williams, A. C., & Kersten, T. A. (2013). Strategies to maintain school district financial solvency: Illinois school business officials' recommendations. *International Journal of Educational Leadership Preparation* 8(2), 94–110. Retrieved from <https://eric.ed.gov/?id=EJ1016275>

Appendix B. Developing and Supporting North Carolina's Teachers¹

Context

Research definitively indicates that teachers are the most important school-based factor affecting student achievement (McCaffrey, Lockwood, Koretz, & Hamilton, 2003; Rivkin, Hanushek, & Kain, 2005; Rowan, Correnti, & Miller, 2002; Wright, Horn, & Sanders, 1997). Therefore, it's critical that states, districts, and schools are strategic and comprehensive about how they develop and sustain their teacher pipelines. As illustrated in Exhibit B1 (Minnici, Barringer, & Hassel, 2016), a comprehensive and coherent approach addresses all stages of the teacher pipeline: attracting teachers into the profession and adequately preparing them to meet the needs of their students, particularly those students who come from challenging circumstances; developing teachers once they are in the classroom and supporting them to continue to be successful in the profession; and retaining effective teachers and making sure the most effective teachers impact as many students as possible. Piecemeal approaches that focus on one stage of the pipeline and ignore others have been ineffective in improving the educator workforce significantly and at scale.

Exhibit B1. A comprehensive approach to strengthening the teacher pipeline



Source: Minnici, Barringer, & Hassel (2016)

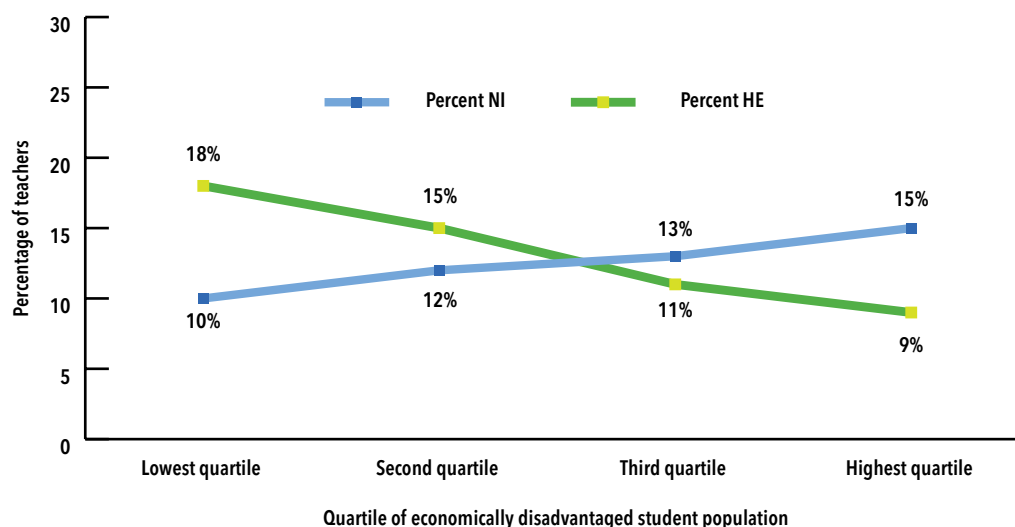
This study addresses one key lever of a comprehensive and coherent approach to strengthening the teacher workforce: developing and supporting in-service teachers across all districts and schools to implement evidence-based and culturally responsive instructional practices that meet students' unique needs. Specifically, the

¹ This study brief summarizes *Developing and Supporting North Carolina's Teachers* (Minnici, Beatson, Berg-Jacobson, & Ennis, 2019).

study examines the extent to which the current policies, programs, and professional environments support the growth and development of North Carolina’s teachers.

Distribution of Effective, Qualified Teachers

Exhibit B2. Percentage of teachers identified as Highly Effective (HE) and Needs Improvement (NI), by quartile of economically disadvantaged student population (2016–17)

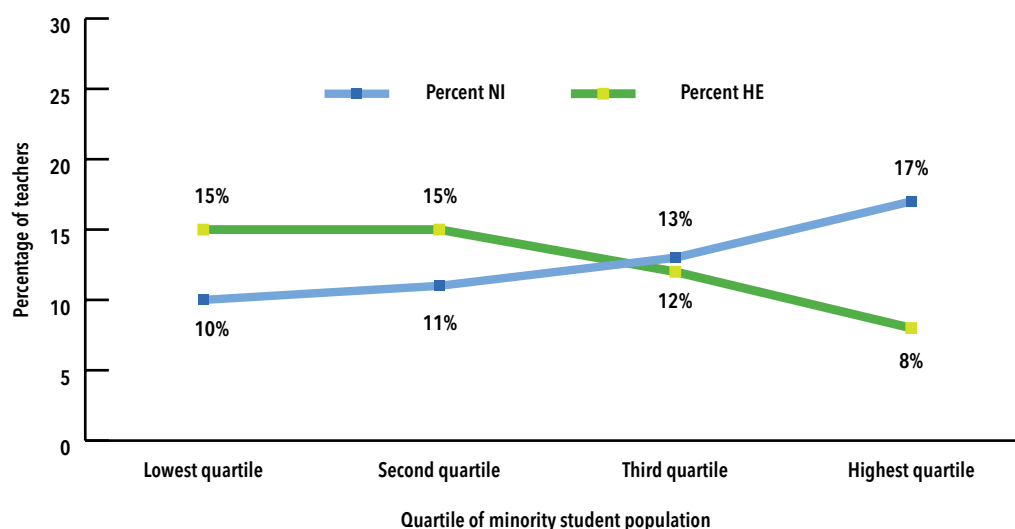


Source: North Carolina Department of Public Instruction (2018)

Every child in North Carolina deserves an effective teacher. For students who come from underserved populations, an effective teacher is even more critical to educational success. Yet the promise of a competent, certified, well-trained teacher is too often left unfulfilled for economically disadvantaged students and students of color, with the least effective teachers more highly concentrated in North Carolina’s highest-poverty schools than in the state’s lowest-poverty schools. In 2017, 15% of teachers in the highest-poverty schools were rated as “Needs Improvement” by the North Carolina Educator Effectiveness System, compared with only 10% of teachers in the lowest-poverty schools (see Exhibit B2).

The gap in access to more effective teachers is even wider in schools serving greater percentages of students of color. In 2017, 17% of teachers in schools with the greatest proportion of students of color were rated as “Needs Improvement,” compared with only 10% of teachers in schools with the lowest proportion of students of color (see Exhibit B3).

Exhibit B3. Percentage of teachers identified as Highly Effective (HE) and Needs Improvement (NI), by quartile of minority student population (2016–17)



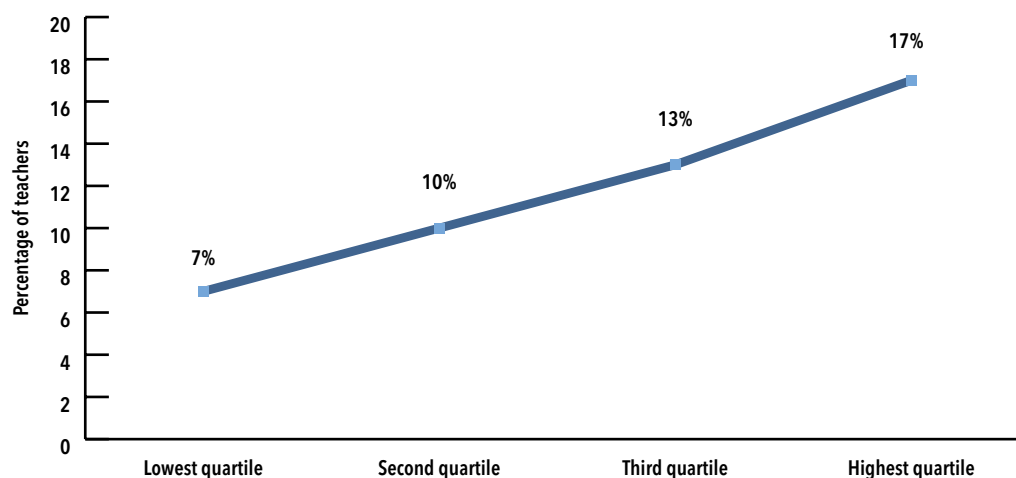
Source: North Carolina Department of Public Instruction (2018)

Furthermore, closing achievement gaps requires that students who are struggling have access to the most effective teachers (TNTP, 2012). Yet, as shown in Exhibits B2 and B3, economically disadvantaged students and students of color are less frequently taught by those teachers designated as “Highly Effective.”

An examination of teacher experience reveals the same disconcerting patterns. The highest-poverty schools and schools with the highest proportions of students of color employed higher percentages of teachers with fewer than three years of experience. In 2017, 15% of teachers in the highest-poverty schools were inexperienced, compared with only 9% of teachers in the lowest-poverty schools (see Exhibit B4). Again, the gap in access to experienced teachers is even wider for students of color. In 2017, 17% of teachers in schools with the greatest proportion of students of color were inexperienced, compared with only 7% of teachers in schools with the lowest proportion of students of color (see Exhibit B5).

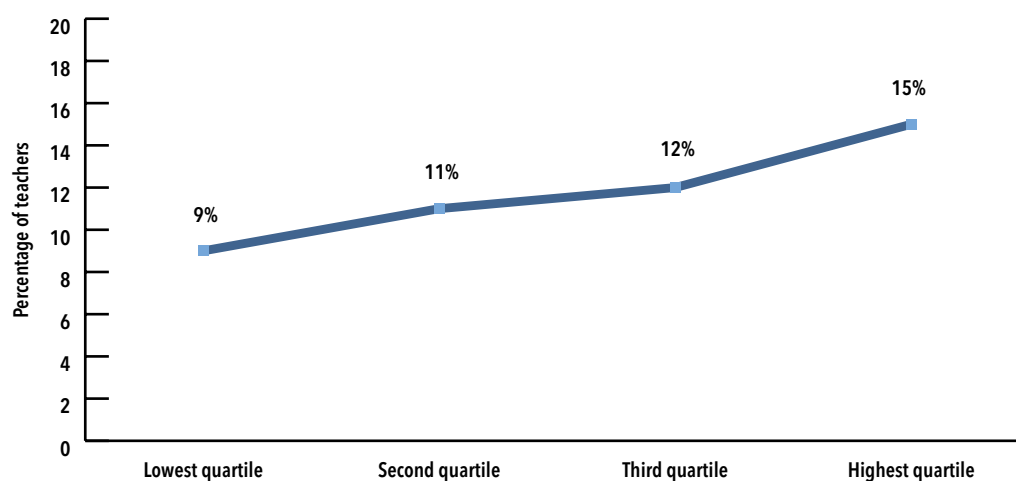
Ensuring that all students, but particularly students of color and economically disadvantaged students, have access to effective and experienced teachers is critical to students’ academic success and to closing persistent achievement gaps (TNTP, 2012). In addition, recent research demonstrates that *all* students — and especially students of color — benefit from opportunities to learn in classrooms led by teachers of color (Cherng & Halpin, 2016). North Carolina’s current teacher workforce, however, comprises only about 20% teachers of color, although more than half of the state’s students are students of color.

Exhibit B4. Percentage of inexperienced teachers, by quartile of economically disadvantaged student population (2016–17)



Source: North Carolina Department of Public Instruction (2018)

Exhibit B5. Percentage of inexperienced teachers, by quartile of minority student population (2016–17)



Source: North Carolina Department of Public Instruction (2018)

These data clearly demonstrate that students of color, economically disadvantaged students, and students in high-poverty schools in North Carolina are all less likely to have access to effective and experienced teachers. Fisher, Frey, and Hattie (2016) assert that all students deserve a great educator but by design, rather than by chance. Revitalizing North Carolina's education system and closing its equity gaps require a multifaceted approach that addresses the adequacy, quality, and diversity of the supply of both current and prospective teachers. For teachers already in the classroom, high-quality professional learning systems that enable and support all teachers across the state to implement evidence-based and culturally responsive instructional practices are essential to closing achievement gaps.

Professional Learning: Examining Practices That Build Teacher Capacity

Teachers continue to grow and develop throughout their careers (Podolsky & Kini, 2016; Kraft & Papay, 2014; Papay & Laski, 2018). Much of this growth depends on the opportunities for professional learning to which teachers have access. Teacher professional learning opportunities often used to be episodic, occurring two to three days a year, generally in the form of one-time workshops or conferences, and many of those opportunities were not connected to teachers' day-to-day teaching practice, did not encourage active reflection, and were not collaborative in nature. Research over the past decade, however, has provided insight into the kinds of professional learning opportunities that result in improved instruction and increased student achievement. Exhibit B6 identifies seven key characteristics of professional learning that are critical in order for those experiences to have a positive impact on both teachers and students (Darling-Hammond, Hylér, & Gardner, 2017).

Exhibit B6. Seven key characteristics of effective job-embedded professional learning

Professional learning is effective when it ...	
Is content focused	Focuses on teaching strategies associated with specific curriculum content; includes an intentional focus on discipline-specific curriculum development and pedagogies
Incorporates active adult learning	Engages teachers directly in designing and trying out teaching strategies, using authentic artifacts and interactive activities to provide deeply embedded, highly contextualized professional learning; moves away from traditional lecture-based learning models and environments
Supports collaboration	Creates space for teachers to share ideas and collaborate in their learning, often in job-embedded contexts
Uses models of effective practice	Provides teachers with a clear vision of what best practices look like; may include lesson plans, unit plans, sample student work, observations of peer teachers, and video or written cases of teaching
Provides coaching and expert support	Involves the one-on-one sharing of expertise about content and evidence-based practices, focused directly on teachers' individual needs
Offers feedback and reflection	Provides built-in time for teachers to think intentionally about, receive input on, and make changes to their practice by facilitating reflection and soliciting feedback
Is of sustained duration	Provides teachers with adequate time to learn, practice, implement, and reflect upon new strategies that facilitate changes in their practice

Source: Descriptions adapted from Darling-Hammond, Hylér, & Gardner (2017)

The key characteristics described in Exhibit B6 indicate that high-quality professional learning requires a multifaceted and systemic approach. Short-term or "one-stop-shop" approaches to professional development, such as after-school workshops and isolated summer trainings, are generally unable to provide what teachers need to support their professional growth. Although there are merits to such one-time events that take place outside the school context, application and refinement of knowledge and strategies gained through professional learning occurs through job-embedded experiences that include, but need not be limited to, professional learning communities, lesson study, and cycles of formative observation and feedback.

The term *job-embedded professional learning* (JEPL)² is commonly used to describe high-quality professional learning that meets the seven key characteristics identified in Exhibit B6. JEPL refers to professional learning that is “grounded in day-to-day teaching practice and is designed to enhance teachers’ content-specific instructional practices with the intent of improving student learning” (Croft, Coggshall, Dolan, Powers, & Killion, 2010, p. 2). This type of professional learning takes place in the school, during or close to the time of student instruction, and is centered on teachers’ actual practice. JEPL is not a cookie-cutter approach and comes in a variety of forms and styles, including self-study, one-on-one coaching and guidance, and collaborative learning in teams. It has been widely identified as a highly effective approach to professional learning and has a myriad of direct applications in both school and district settings.

The Role of Teachers’ Professional Environment in Their Growth and Development

In addition to the availability and quality of professional learning opportunities, research suggests that teachers’ professional environments also influence their development (Kraft & Papay, 2014; Papay & Kraft, 2013; Papay & Laski, 2018). In other words, the conditions of teachers’ working environments play a role in the growth and development of their knowledge and skills and can impact how quickly teachers move (or do not move) from novice to proficient to expert. For example, Papay and Kraft (2013) found that a positive working environment helped explain why some teachers improve over a three-year period of time compared with teachers working in less positive environments. In their 2014 study of North Carolina’s Charlotte-Mecklenburg Schools, Kraft and Papay investigated how teachers’ professional environment influences their development and effectiveness. They define a professional environment as having the elements described in Exhibit B7.

2 Job-embedded professional learning is occasionally referred to as job-embedded professional development (JEPD). The terms are used interchangeably for the purposes of this report.

Exhibit B7. Elements of teacher professional environments

Element	Description
Order and discipline	Extent to which the school is a safe environment, where rules are consistently enforced, and administrators assist teachers in their efforts to maintain an orderly classroom
Peer collaboration	Extent to which teachers are able to collaborate to refine their teaching practices and work together to solve problems in the school
Principal leadership	Extent to which school leaders support teachers and address their concerns about school issues
Professional development	Extent to which the school provides sufficient time and resources for professional development and uses them in ways that enhance teachers' instructional abilities
School culture	Extent to which the school environment is characterized by mutual trust, respect, openness, and commitment to student achievement
Teacher evaluation	Extent to which teacher evaluation provides meaningful feedback that helps teachers improve their instruction and that is conducted in an objective and consistent manner

Source: Reprinted from “Do supportive professional environments promote teacher development? Explaining heterogeneity in returns to teaching experience,” by Kraft & Papay (2014), in *Educational Evaluation and Policy Analysis*. Retrieved from <https://doi.org/10.3102/0162373713519496>

To support their growth and development, teachers must have sufficient opportunities to engage in high-quality JEPL that includes experiences that are interactive, sustained, and differentiated according to their needs. Although targeted professional learning for novice teachers through comprehensive, multiyear induction and mentoring is essential for mitigating the negative effects of inexperience on student outcomes (Ingersoll & Strong, 2011), these high-quality JEPL opportunities should not be limited to teachers' first few years on the job. Research suggests that teachers can and do continue to develop over the course of their careers, but not without the support to do so (Kraft & Papay, 2014).

High-quality JEPL is just one aspect of teachers' professional environments, and alone, it is not sufficient; teachers' continuous growth and development hinges on the quality of the collective aspects of the professional environment. That is, strong leadership must advocate and create the conditions for JEPL to occur, such as providing timely, actionable feedback — or allocating the resources for others to do so — and making necessary adjustments to the scheduling structure to facilitate peer collaboration.

North Carolina's Policies to Support Teacher Growth and Development

North Carolina has a rich history of supporting its teachers' growth and development. Yet despite this rich history and initial investments in the teacher pipeline, many programs and policies that had been put in place over the past several decades are no longer being funded or have been eliminated altogether. For example, in 1985, the state created the North Carolina Center for the Advancement of Teaching (NCCAT) to provide innovative support to veteran teachers through weeklong residential programs to conduct research and develop leadership skills. By

2006, state funding for the NCCAT, which at that time served as many as 5,000 teachers per year, had increased to \$7 million annually. In 2011, however, the budget was cut by more than 50%, and the program changed dramatically.

Another example of a state-supported program is the Teacher Academy, which was established in the mid-1990s to support professional development for teachers and administrators. By 2010, the annual budget for the Teacher Academy had grown to \$4.7 million, and it began to customize professional development for teachers and administrators in *Leandro* schools and districts, per their school improvement plans. The Teacher Academy was ultimately defunded in 2010.

And in the early 2000s, the Coach2Coach program was in effect. During that time, the program organized and provided “systematic, professional support statewide” to those who mentored new teachers or supervised preservice interns (Edelfelt & Coble, 2004, p. 453). During the 2001–02 school year, nearly 5,000 preservice teachers and faculty and more than 13,000 in-service teachers participated in sessions conducted by Coach2Coach teachers (Edelfelt & Coble, 2004). However, this program, too, has since been eliminated.

Beginning in 2010, the state began using some of its Race to the Top (RttT) grant funding to develop and implement a wide array of professional learning reforms, including state-level support for the transition to new curriculum standards, the implementation of formative and summative assessments, the use of data to support instruction, the effective utilization of the North Carolina Educator Evaluation System, and the use of technology for teaching and learning (Smart et al., 2015). Much of this support became unsustainable, however, upon the expiration of the grant period in 2015. More recently, the state has reintroduced some of these professional learning reforms under the Every Student Succeeds Act (ESSA), but a lack of state-level funding and capacity to implement the reforms has prevented widespread, consistent impact on instructional practices.

Since the initial RttT funding, the state’s financial investment in high-quality JEPL has decreased significantly, and there isn’t adequate funding to support teacher professional learning, particularly in low-wealth districts, which, unlike their wealthier counterparts, cannot compensate for the decrease in state funding through district-funded initiatives.

Approach

To address the extent to which the current policies, programs, and professional environments support the growth and development of North Carolina’s teachers, WestEd examined the following qualitative and quantitative data sources.

Equitable-Access Data

WestEd conducted an analysis of teacher effectiveness and experience data from the National Center for Education Statistics (NCES) by quartiles of economically disadvantaged students and students of color to determine the extent of inequities in access to “excellent educators.” The North Carolina ESSA Consolidated State Plan also served as a key source for equitable-access data, given that individual-level overall-effectiveness-status data are not publicly available through the NCES.

Teacher Working Conditions Survey

WestEd accessed and analyzed publicly available data from the biannual North Carolina Teacher Working Conditions Survey. More than 120,000 educators responded to the survey, which was most recently administered in 2018. The survey measures the constructs described in Exhibit B8.

Exhibit B8. Constructs measured by the North Carolina Teacher Working Conditions Survey

Construct	Description
Community support and involvement	Community and parent/guardian communication and influence in the school
Teacher leadership	Teacher involvement in decisions that impact classroom and school practices
School leadership	Ability of school leadership to create trusting, supportive environments and address teacher concerns
Management of student conduct	Policies and practices to address student conduct issues and ensure a safe school environment
Use of time	Available time to plan, collaborate, provide instruction, and eliminate barriers in order to maximize instructional time during the school day
Professional development	Availability and quality of learning opportunities for educators to enhance their teaching
Facilities and resources	Availability to educators of instructional, technology, office, communication, and school resources
Instructional practices and support	Data and support available to teachers to improve instruction and student learning

Source: Reprinted from 2018 North Carolina Teacher Working Conditions Survey Scatterplots Companion, by The New Teacher Center (2018). Retrieved from https://ncteachingconditions.org/uploads/File/NC18_companion_for_composites.pdf

Principal Survey

WestEd designed and administered an online, statewide survey for all principals. The survey included 75 items that addressed the components of a sound basic education: effective teachers and principals in all classrooms and schools, adequate resources, and an assessment and accountability system that can monitor and demonstrate progress. Approximately 840 principals responded to the survey.

Extant Data

WestEd reviewed a variety of extant data, analyzing information included within already-existing documentation of policies and programs and their impact, including the following:

- » Independent Operational Assessment of the North Carolina Department of Public Instruction
- » North Carolina ESSA Consolidated State Plan

- » North Carolina State Plan to Ensure Equitable Access to Excellent Educators
- » Outcomes for Beginning Teachers in a University-Based Support Program in Low-Performing Schools
- » Race to the Top Professional Development Evaluation Report

Focus Groups and Interviews

WestEd conducted interviews and focus groups with teachers, principals, superintendents, and other district and state professionals. Researchers coded transcripts from 52 interviews and focus groups conducted during site visits throughout the state. The participants were from eight different districts, four of which were plaintiffs in the *Leandro* lawsuit. The participants included 14 teacher focus groups, 16 interviews of principals, 13 district-level staff interviews, 2 interviews with superintendents, and 4 interviews with participants from related organizations, such as the North Carolina Principals and Assistant Principals Association and the North Carolina Department of Health and Human Services.

Findings

The following are major findings about the current state of in-service teacher growth and development in North Carolina.

Access to and quality of professional learning opportunities vary across schools and districts

There is some evidence that professional learning opportunities exist in almost every North Carolina school and district environment, but the frequency, approach, and overall quality of those opportunities vary. The state's once-extensive infrastructure and funding for professional learning has been greatly reduced, and many teachers report that what is being offered often fails to meet high-quality professional development standards: professional development that is sustained over time, that features active learning and collaboration for teachers, that is content focused and embedded in the job, and that has opportunities for developing new practices supported by coaching and reflection.

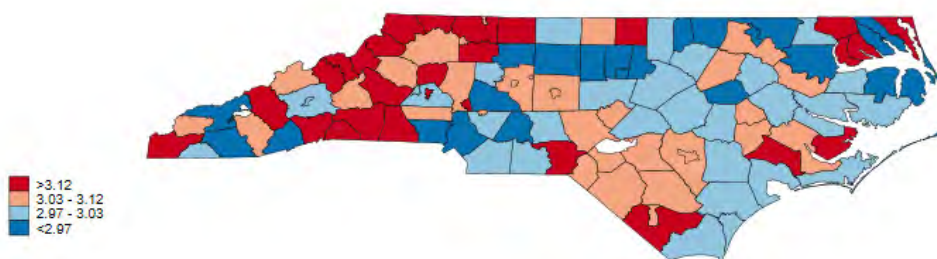
Teachers' professional environments differ across the state and influence teacher growth and development

WestEd researchers replicated and expanded on previous work by Kraft and Papay (2014) to explore the theory that supportive professional environments are likely to increase the rate at which a teacher's effectiveness grows with each additional year of experience. For example, a teacher will generally improve between the first and second year of teaching, but the same teacher would improve more over this period if the environment were relatively more supportive than the environment in other schools in the district. Overall, the results of the study replicated those of Kraft and Papay (2014), confirming their findings; however, this study, which looked beyond

the Charlotte-Mecklenburg, North Carolina, district, revealed that the effect of the professional environment on returns to teacher experience varies widely from district to district in North Carolina.

As part of this study, researchers used the most up-to-date available data from the North Carolina Teacher Working Conditions Survey to replicate Kraft and Papay's (2014) measure of teachers' professional environments. Based on this new measure (which itself is based on teachers' perceptions of six key elements of their professional environments: order and discipline, peer collaboration, principal leadership, professional development, school culture, and teacher evaluation), the study found that the quality of professional environments varied across the state. Exhibit B9 geographically illustrates the variation in district-level average ratings of professional environments in the most recent year of data, the 2015–16 school year. This average score is drawn from responses on a 4-point scale, with 4 being the most positive and 1 being the least positive. Therefore, an average score of 2.5 would suggest an even distribution of positive and negative scores. Districts in red are above the median rating, and those in blue and dark blue are below. It is important to note that our study was limited by the specificity of this data, which did not classify the professional environments that exist at the school-building level. Knowing that differences exist in district-level averages of professional environments provides us with some information, but school-level analyses would yield more actionable data for school and district leaders.

Exhibit B9. District-level average professional environment rating (2015–16)



Teacher focus group participants reported on the importance of professional environment to their growth and development. They highlighted that having opportunities to learn and grow, especially through collaboration with a community of colleagues, is a key aspect of a positive professional environment. Many teachers also reflected on the role their school leaders play in creating a positive professional environment, and some principals themselves highlighted the importance of their maintaining high expectations for teachers and students and their responsibility for setting a clear vision of success.

State-level efforts that support teacher growth and development are inadequate and inequitable

As described earlier, there has been a significant decrease in North Carolina in funding and support for professional learning for teachers over the past decade, resulting in reduced capacity to provide adequate professional learning for teachers. Due to cuts in funding and capacity at the state level, there is a limited availability of high-quality professional learning opportunities for teachers. Many principals and superintendents interviewed for this study reported that there is a lack of support and funding from the North Carolina Department of Public

Instruction (NCDPI) to provide high-quality professional learning opportunities for teachers. Superintendents that were interviewed noted that professional development is critical to recruiting, developing, and retaining teachers. However, they also reported significant barriers to implementing high-quality programs. Specifically, participants noted that the state does not fund professional development and that mentor pay has been cut. Furthermore, low-wealth districts have fewer local funds to use to provide extended professional learning opportunities for staff. For example, low-wealth districts have fewer resources to find substitutes for teachers to attend professional development sessions and less money to pay for teachers' time outside school hours or to pay for travel to conferences.

North Carolina's regional support system lacks the capacity to support teacher growth and development for all districts

A regional approach was identified by many stakeholders at all levels as a promising strategy to address improving the quality of teachers. Due to a lack of funding and capacity, the NCDPI does appear to be shifting its approach away from supporting individual districts and toward developing a regional approach; however, the structures that are in place to provide such regionally based support vary in focus, strength, and quality. For example, the existing Regional Education Service Areas (RESAs) have the potential to customize their services to their member districts, but those services vary by region in terms of availability, quality, and focus. In addition, as reported by interviewees, RESAs currently replicate inequity and inequality across the state, based on whom they serve and how they receive their funding — that is, from their member districts rather than from the state.

The NCDPI does not systematically collect and analyze data about the types and effectiveness of professional learning opportunities available to teachers

Gathering and analyzing additional information is necessary to gain a more complete understanding of the current state of professional learning across North Carolina. Currently, critical data and information about the quality of professional learning opportunities do not exist for all districts (particularly not for low-wealth districts) and are not collected systematically across the state. Although some data are collected through the North Carolina Teacher Working Conditions Survey, the limited scope of the survey reveals little about teachers' perceptions of their professional development opportunities. Further evidence of the extent to which professional learning opportunities are available — or how closely those opportunities align with JEPL or lead to changes in instructional practice or student outcomes — is lacking.

Conclusions

Access to effective, diverse, and experienced teachers is critical for students' academic success and well-being, especially for economically disadvantaged students and students of color. Yet currently, North Carolina's most underserved students do not have equitable access to the teachers they need the most. Supporting teachers' growth and development is essential to reversing this trend and promoting student success. However, meaningful statewide improvements can come only when high-quality job-embedded professional learning experiences are

available for all teachers. Although many professional learning programs and initiatives appear within the state's ESSA plan, implementation is variable or just emerging, with little quality or impact data available. Further, many teachers in North Carolina reported having little or no access to high-quality JEPL.

The research team's analysis of professional environments in North Carolina school districts showed great variation across the state. Although some teachers may be able to thrive in schools with poor professional environments, most teachers need positive working conditions to be successful and continue to develop throughout their career. Our analysis found that at the state level, there are weak structures for systemic supports for teacher development and support, including induction, coaching, and mentoring.

Support for teachers' growth and development should not — and cannot — be so variable when student success depends so heavily on it. To implement models and practices reflecting the tenets of job-embedded professional learning at scale and thereby improve the quality of the teaching workforce, we must look beyond improving individual teachers and instead focus on improving the organizations in which they teach at a systems level (Kraft & Papay, 2014; Jennings, Minnici, & Yoder, forthcoming 2019; Papay & Laski, 2018). This requires a focus on improving North Carolina's wide-scale infrastructure for professional learning at the state, district, and school levels.

References

- Cherng, H. S., & Halpin, P. F. (2016). The importance of minority teachers: Student perceptions of minority versus White teachers. *Educational Researcher*, 45(7), pp. 407–420.
- Croft, A., Coggs, J. G., Dolan, M., Powers, E., & Killion, J. (2010). *Job-embedded professional development: What it is, who is responsible, and how to get it done well*. Washington, DC: National Comprehensive Center for Teacher Quality.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development* [Fact sheet]. Palo Alto, CA: Learning Policy Institute.
- Edelfelt, R., & Coble, C. (2004). University–school teacher education partnerships in North Carolina. *Journal of In-service Education*, 30(3), 443–462. Retrieved from <https://www.tandfonline.com/doi/pdf/10.1080/13674580400200250>
- Fisher, D., Frey, N., & Hattie, J. (2016). *Visible learning for literacy*. Thousand Oaks, CA: Corwin Press.
- Ingersoll, R., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Education Research*, 81(2), 201–233. Retrieved from https://repository.upenn.edu/gse_pubs/127/
- Jennings, P. A., Minnici, A., & Yoder, N. (Forthcoming 2019). Creating the working conditions to enhance teacher social and emotional well-being. In D. Osher, M. J. Mayer, R. J. Jagers, K. Kendziora, & L. Wood (Eds.), *Keeping students safe and helping them thrive: A collaborative handbook on school safety, mental health, and wellness* (Vols. 1–2). Santa Barbara, CA: Praeger/ABC-CLIO.
- Kraft, M. A., & Papay, J. P. (2014). Do supportive professional environments promote teacher development? Explaining heterogeneity in returns to teaching experience. *Educational Evaluation and Policy Analysis*, 36(4), 476–500. Retrieved from <https://doi.org/10.3102/0162373713519496>
- McCaffrey, J. R., Lockwood, D. F., Koretz, D. M., & Hamilton, L. S. (2003). *Evaluating value-added models for teacher accountability*. Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/pubs/monographs/2004/RAND_MG158.pdf
- Minnici, A., Barringer, M-D., & Hassel, B. (2016). *Time for action: Building the educator workforce our children need now*. Washington, DC: American Institutes for Research. Retrieved from https://gtlcenter.org/sites/default/files/Building_Educator_Workforce.pdf
- Minnici, A., Beatson, C., Berg-Jacobson, A., & Ennis, J. (2019). *Developing and supporting North Carolina's teachers*. San Francisco, CA: WestEd.
- New Teacher Center. (2018). *2018 North Carolina Teacher Working Conditions Survey scatterplots companion*. Santa Cruz, CA: Author. Retrieved from https://ncteachingconditions.org/uploads/File/NC18_companion_for_composites.pdf
- North Carolina Department of Public Instruction. (2018). *North Carolina Every Student Succeeds Act (ESSA) Consolidated State Plan*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.ncpublicschools.org/docs/succeeds/nc-essa-state-plan-final.pdf>
- Papay, J. P., & Kraft, M. A. (2013). *Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career growth* (working paper, Harvard Graduate School of Education, Boston, MA, 2013). Retrieved from <http://scholar.harvard.edu/mkraft/publications/productivity-returns-experience-teacher-labor-market-methodological-challenges-a>

- Papay, J., & Laski, M. (2018). *Exploring teacher improvement in Tennessee: A brief on reimagining the state support for professional learning*. Nashville, TN: Tennessee Education Research Alliance. Retrieved from https://peabody.vanderbilt.edu/research/tnedresearchalliance/files/Exploring_Teacher_Improvement.pdf
- Podolsky, A., & Kini, T. (2016). *How effective are loan forgiveness and service scholarships for recruiting teachers?* Palo Alto, CA: Learning Policy Institute.
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417–458. Retrieved from <https://econ.ucsb.edu/~jon/Econ230C/HanushekRivkin.pdf>
- Rowan, B., Correnti, R., & Miller, R. J. (2002). What large-scale survey research tells us about teacher effects on student achievement: Insights from the prospects study of elementary schools. *Teachers College Record*, 104(8), 1525–1567.
- Smart, A., Bryant, L., Kellogg, S., Corn, J., Pilzer Weiss, S., Parker, B., Ramirez, A., Walton, M., & Davis, C. (2015). *Fourth annual Race to the Top professional development evaluation report*. Consortium for Educational Research and Evaluation–North Carolina.
- TNTP. (2012). *The irreplaceables: Understanding the real retention crisis in America's urban schools*. Brooklyn, NY: Author. Retrieved from https://tntp.org/assets/documents/TNTP_Irreplaceables_2012.pdf
- Wright, P., Horn, S., & Sanders, W. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education*, 11(1), 57–67.

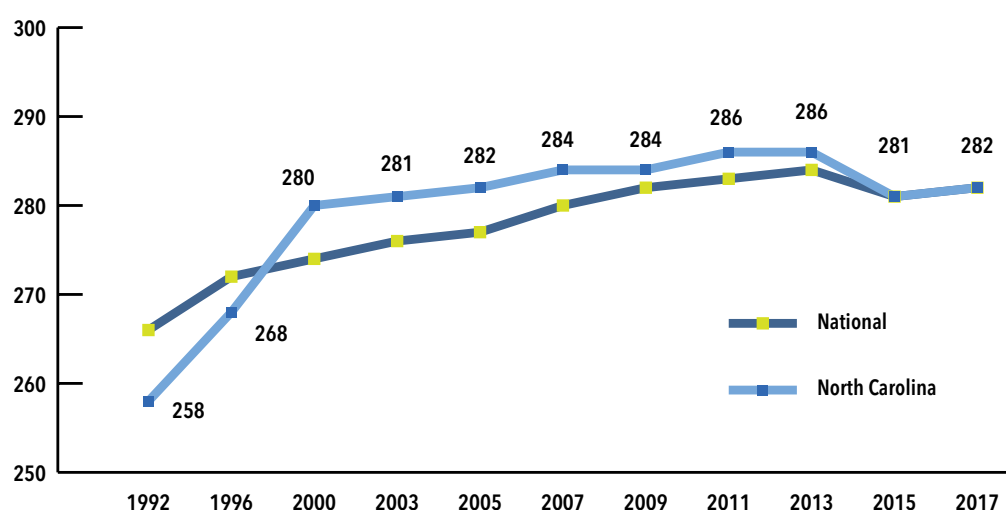
Appendix C. Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations¹

Historical Context

North Carolina was recognized during the 1980s and 1990s as an example of how state policymakers could turn around a state education system by making strong investments in teachers' knowledge and skills, standards for students and teachers, and early childhood support and education. North Carolina's education system was extensively studied by the National Education Goals Panel when the state's efforts resulted in sharp increases in student performance and reduction in the achievement gap.

Although North Carolina had entered the 1990s near the bottom of the state rankings, during the decade, it posted the largest student achievement gains of any state in mathematics, and it realized substantial progress in reading, becoming the first southern state to score above the national average in fourth grade reading and mathematics on the National Assessment of Educational Progress (NAEP). Also during the 1990s, North Carolina was the most successful of all states in narrowing the achievement gap between White students and students of color (National Education Goals Panel, 1999). In 2007, North Carolina remained the top-scoring southern state in mathematics, ranking on a par with states like Idaho and Maine, which had many fewer poor and minority students (see Exhibit C1).

Exhibit C1. North Carolina achievement trends on the NAEP, eighth grade mathematics



Source: National Assessment of Educational Progress, 1992–2017

However, cutbacks that began during the Great Recession, beginning in 2008, and much deeper legislative cuts over the last few years have eliminated or greatly reduced many of the programs put in place during the 1990s,

¹ This study brief summarizes *Educator Supply, Demand, and Quality in North Carolina: Current Status and Recommendations* (Darling-Hammond et al., 2019).

and this has begun to undermine the quality and equity gains that were previously made. Declines in achievement have occurred since 2013 in mathematics and reading on the NAEP, and achievement gaps have widened.

For example, on the NAEP between 2015 and 2017, the gap grew between Black and White students in both eighth grade mathematics and reading. In mathematics, the gap increased substantially, from 29 to 37 points.² In reading, the gap grew from 24 to 28 points as the scores of both groups of students declined, but Black students' scores fell further.³

Findings: Current Status of Teaching and Leadership in North Carolina

The *Leandro* decision emphasizes children's rights to qualified teachers and principals who can provide a sound basic education that prepares students for college and careers and meets the needs of those who are at risk. Providing such high-quality educators for each child demands an adequate supply that is equitably distributed, along with supports for ongoing professional learning that enable educators to meet children's needs.

This study documents the current status of educator supply, demand, and quality in North Carolina for teachers and school leaders. It also examines current and past policies that influence teacher and leader development and supply in the state and makes recommendations for how to ensure that all children have access to well-prepared educators.

This study found that, as a function of reforms and investments in the 1980s and 1990s, North Carolina once had a very robust support system for developing and supporting the educator workforce. That system included the following:

- » Incentives for strong candidates to prepare for, enter, and stay in teaching and school leadership, through the North Carolina Teaching Fellows and Principal Fellows programs
- » Rigorous standards for teacher preparation and supports for high-quality clinical training
- » Mentoring for beginning teachers
- » Rich professional development offerings for teachers and school leaders, in part through the North Carolina Center for the Advancement of Teaching and the North Carolina Teacher Academy, as well as intensive supports for learning at the local level
- » Teacher and leader compensation approaching the national average and incorporating recognition of National Board certification

These investments paid off. Teachers prepared in North Carolina universities are more effective and much more likely to stay in teaching than those entering through other pathways, with North Carolina Teaching

2 White students' scores increased from 292 to 295, whereas Black students' scores decreased from 263 to 258.

3 White students' scores fell from 272 to 271, whereas Black students' scores fell from 248 to 243.

Fellows at the top end of the effectiveness and retention scale (Henry et al., 2014). North Carolina Principal Fellows are more likely than others to enter and stay in the principalship as well. As noted in the Historical Context section, there was a period of time in the 1990s when North Carolina had virtually eliminated educator shortages and had the greatest gains in student achievement of any state, along with the greatest narrowing of the achievement gap. However, most of the elements of this system have been reduced or eliminated.

Current Status of the Teaching Workforce

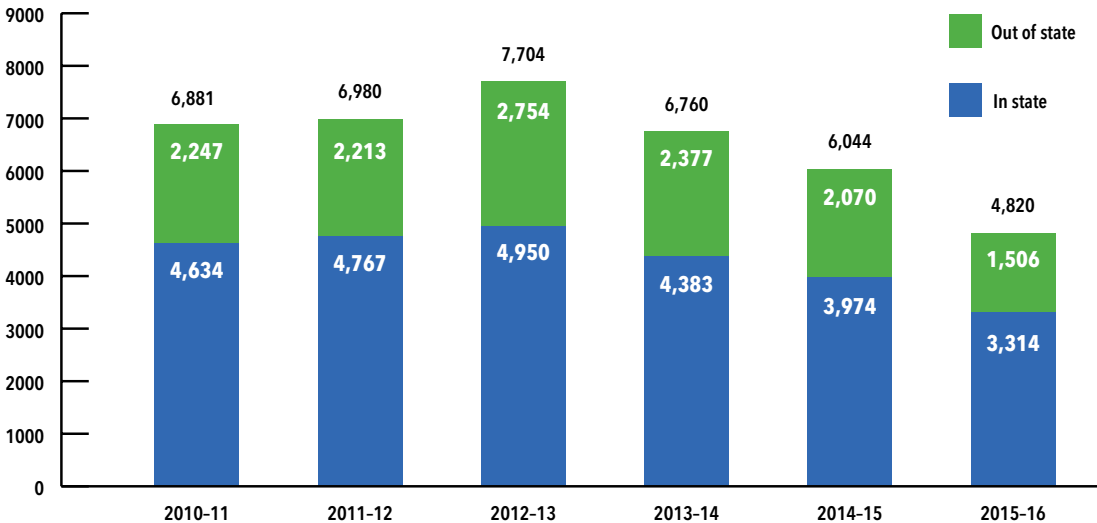
North Carolina has gone from having a very highly qualified teaching force as recently as a decade ago to having one that is extremely uneven in terms of the numbers of candidates, the quality of their preparation (particularly for teaching in high-poverty schools), and the extent to which they have met any standards at all before they enter teaching. The remainder of this section describes the challenges faced by North Carolina to developing and retaining a highly qualified teacher workforce.

Supply is shrinking and shortages are widespread

Budget cuts reduced the total number of teachers employed in North Carolina by 5% from 2009 to 2018, even as student enrollments increased by 2%. This means that class sizes have grown and that programs have been cancelled to accommodate the reduction in staff.

As the size of the workforce has shrunk, teacher shortages are becoming widespread. The number of teacher credentials issued between 2011 and 2016 declined by 30% (see Exhibit C2). Meanwhile, annual teacher attrition, at 8%, is higher in North Carolina than the national average. As a consequence of high turnover and declining supply, the state reported 1,621 teacher vacancies that could not be filled by qualified teachers during 2017–18, with the greatest numbers of vacancies in positions for teachers of exceptional children at all levels, elementary teachers, math teachers, and career and technical educators.

Exhibit C2. Teachers credentialed in state and out of state, 2010–11 through 2015–16

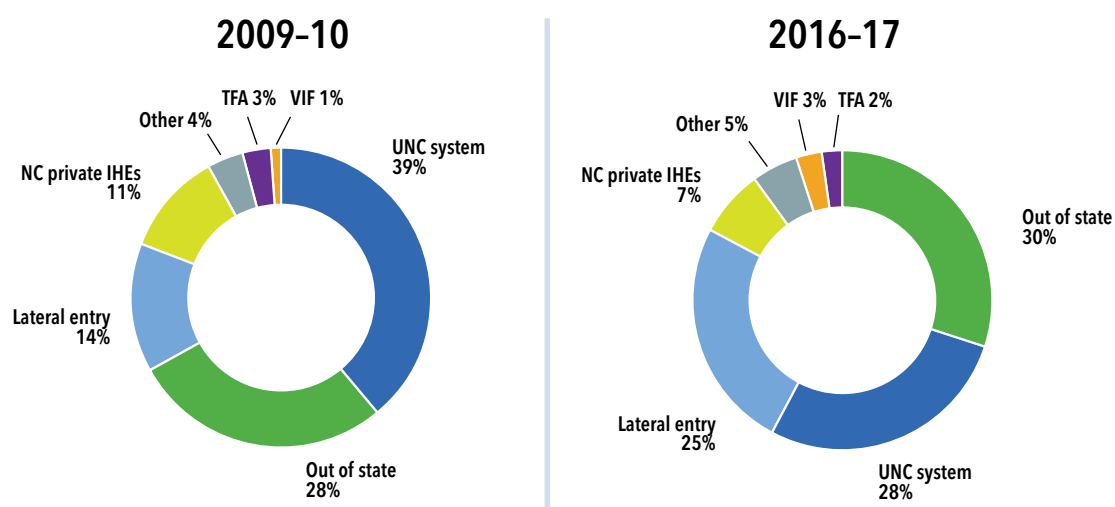


Source: Title II Higher Education Act (2018)

Attrition, vacancies, and the hiring of unqualified teachers are highest by far in high-poverty communities, with particularly challenging conditions in the northeastern corner of the state. Vacancy rates were 12% or higher in Anson and Northampton counties, for example.

The proportion of teachers in North Carolina who are not fully licensed has more than doubled since 2011, from 4% to 8%, and in high-poverty schools, as many as 20% of teachers are unlicensed. As Exhibit C2 shows, the sources of teacher supply have shifted dramatically over recent years, with 27% of candidates now entering through alternative routes (e.g., lateral entry, Teach for America recruits) without preservice preparation and only 35% of the state’s teachers coming through North Carolina colleges and universities — a share that was as high as 60% in 2001 and 50% in 2010 (see Exhibit C3).

Exhibit C3. Preparation pathways of new teachers, 2009–10 and 2016–17



Source: Education Policy Initiative at Carolina, University of North Carolina analysis of Department of Public Instruction data sets.

Note: “UNC” stands for “University of North Carolina.” “IHE” stands for “institute of higher education.” “TFA” stands for “Teach for America.” “VIF” stands for “visiting international faculty.”

These changes in the sources of teacher supply are important because there are major differences in the effectiveness and retention of teachers from these different pathways. Researchers have found that teachers prepared by North Carolina universities are generally significantly more effective than those prepared out of state, and they stay in teaching at much higher rates (Henry et al., 2014; see Exhibit C4). This higher performance and higher retention may be in part related to the reforms described earlier, which required North Carolina schools of education to become nationally accredited and leveraged much stronger licensing and teacher education practices in the state.

Exhibit C4. Teacher retention rates after three and five years in the field, by teacher preparation pathway

Teacher preparation pathway	Three-year retention rate	Five-year retention rate
University of North Carolina system	85%	72%
North Carolina private institute of higher education	83%	69%
Out of state	66%	48%
Lateral entry	65%	48%
Visiting international faculty	68%	49%
Teach for America	24%	7%
Unclassified	75%	65%

Source: University of North Carolina Educator Quality Dashboard

Meanwhile, lateral-entry teachers, other than the tiny proportion who are Teach for America (TFA) recruits, are significantly less effective than teachers who have been prepared before entering the teaching workforce, and they leave teaching at much higher rates. Most of these teachers are concentrated in high-poverty schools.

Although there has been an increase in the number of teachers of color (now about 30% of teacher enrollments in state teacher preparation programs), some of these teachers — particularly African American and Native American recruits — are primarily entering through alternative routes, which have much higher attrition rates. One reason for this is the steep drop in teacher education enrollments in minority-serving institutions, including historically Black colleges, which decreased by more than 60% between 2011 and 2016.

Teachers of color are an important resource. Recent research — much of it conducted in North Carolina — has found that having a same-race teacher has a positive impact on the long-term education achievement and attainment of students of color, particularly African American students (e.g., Dee, 2004; Gershenson, Hart, Lindsay, & Papageorge, 2017).

These patterns of underprepared teachers leaving the profession are also obvious in more current annual attrition rates. As Exhibit C5 shows, in 2017–18, experienced, licensed teachers had the lowest annual attrition rates, at 7%. TFA teachers had the highest attrition rates, at 28%, and the attrition rate for lateral-entry teachers was 16%, more than twice the rate of non-lateral-entry teachers (Public Schools of North Carolina, North Carolina State Board of Education, & North Carolina Department of Public Instruction, 2019, p. 7). These differences in attrition rates mirror national trends, which show that teachers without prior preparation leave the profession at two to three times the rate of those who are comprehensively prepared (Ingersoll, Merrill, & May, 2014).

Exhibit C5. State annual attrition rates by teacher category, 2017–18

Category of teachers		Total number of teachers in category, 2017–18	Number of teachers leaving employment in North Carolina public schools	Percentage attrition in category, 2017–18
Experienced, licensed teachers		79,314	5,749	7%
Beginning teachers*		15,595	1,925	12%
TFA teachers	All	449	127	28%
	Before contract term	399	80	20%
VIF teachers	All	1,176	197	17%
	Before contract term	1,074	95	9%
Lateral-entry teachers		5,636	874	16%

Source: Public Schools of North Carolina, North Carolina State Board of Education, & North Carolina Department of Public Instruction (2019)

*"Beginning teachers" includes all teachers with fewer than three years of teaching experience. This includes some, but not all, lateral-entry teachers.

Note: "TFA" stands for "Teach for America." "VIF" stands for "visiting international faculty."

These attrition rates have noticeable effects on student learning, as they affect teachers' levels of experience, which positively influence student achievement, and they affect rates of teacher turnover at school sites, which negatively affect student achievement (Ronfeldt, Loeb, & Wyckoff, 2013; Podolsky, Kini, & Darling-Hammond, in press). The pathways that are associated with considerable teacher churn in schools are, unfortunately, the ones that have been growing in recent years in North Carolina.

Attrition and growing teacher demand are increasing the need for hiring

As presented in Exhibit C6, the North Carolina Department of Commerce estimates that the total number of teachers in K–12 schools will grow approximately 5% between 2017 and 2026. The highest rate of growth is expected in kindergarten teacher positions, followed by middle school and secondary school positions, exclusive of career and technical positions. Overall, the total number of position openings, accounting for teachers who will need to be replaced, is expected to be 72,452 by 2026.

Exhibit C6. Projected demand for North Carolina K–12 teachers, by grade level, 2017 to 2026

	Employment estimate, 2017	Employment estimate, 2026	Net change	Percent change	Total openings from exits ¹	Total openings from transfers ²	Total openings ³
All teachers, K–12	104,619	109,440	4,821	4.61	31,498	36,133	72,452
Kindergarten teachers (except special education)	3,127	3,284	157	5.02	1,243	1,541	2,941
Elementary school teachers (except special education)	38,762	40,553	1,791	4.62	11,778	13,213	26,782
Middle school teachers (except special and career and technical education)	18,770	19,657	887	4.73	5,706	6,402	12,995
Secondary school teachers (except special and career and technical education)	23,104	24,199	1,095	4.74	6,520	7,942	15,557
Career technical education teachers, middle school	1,217	1,273	56	4.60	370	415	841
Career and technical education teachers, secondary school	4,844	5,032	188	3.88	1,361	1,658	3,207
Special education teachers, kindergarten and elementary school	7,671	8,008	337	4.39	2,344	2,573	5,254
Special education teachers, middle school	2,947	3,076	129	4.38	900	988	2,017
Special education teachers, secondary school	4,177	4,358	181	4.33	1,276	1,401	2,858

Source: 2026 North Carolina Employment Projections Summary, North Carolina Department of Commerce, <https://www.nccommerce.com/data-tools-reports/labor-market-data-tools/employment-projections>

Notes: (1) “Total openings from exits” reflects estimated position openings based on workers leaving the teacher labor force. (2) “Total openings from transfers” reflects estimated position openings based on workers leaving teaching for a different occupation. (3) “Total openings” reflects the difference between the projected (2026) and the base year (2017) employment.

As is true nationally, nearly all of this demand for teachers is expected to be the result of attrition from the teaching profession. The combination of teacher exits from the state workforce and transfers to nonteaching jobs is 93% of the expected demand. If this teacher attrition could be cut in half (which would then represent the attrition rates in the New England states and in a number of high-achieving countries), shortages could be eliminated.

However, current conditions in North Carolina are pointing in the opposite direction, as 10% of teachers say they plan to leave teaching as soon as possible, compared with about 7% of teachers nationally.

Attrition is highest in high-poverty districts, such as Warren County Schools, Halifax County Schools, Thomasville City Schools, and Vance County Schools. For example, Warren County Schools lost one third of its teaching force in 2017–18, whereas schools in the more affluent Macon County lost only 4% of their teaching force.

Salaries and working conditions influence both retention and school effectiveness

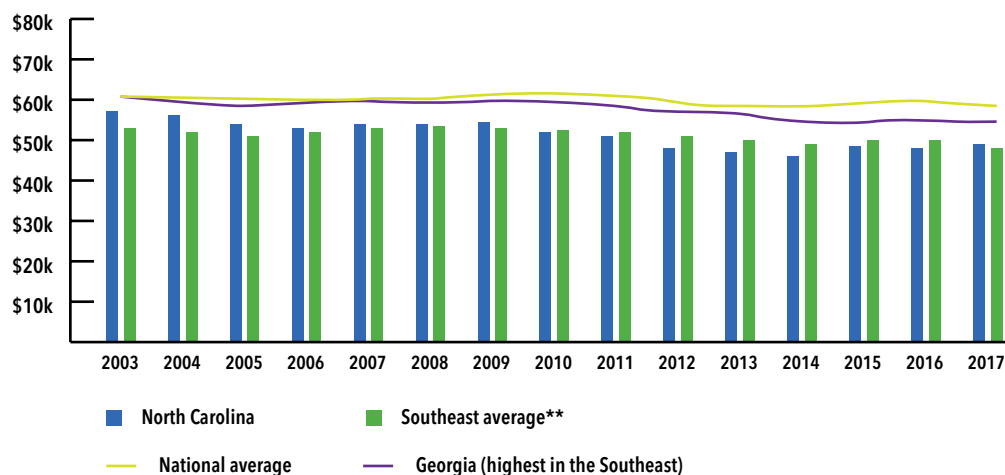
In national research, teacher attrition is typically predicted by the following four factors:

- » The extent of preparation to teach
- » The extent of mentoring and support for novices
- » The adequacy of compensation
- » Teaching and learning conditions on the job

As noted above, the extent of preparation does influence teacher attrition in North Carolina. Furthermore, the severe budget cuts in North Carolina have resulted in reductions in teacher salary, in cuts to the state mentoring program, and in the deterioration of working conditions, all of which can discourage individuals from entering and remaining in teaching.

After climbing for many years as part of a campaign to reach the national average, teacher compensation began falling in North Carolina after 2008, losing ground against both national benchmarks and the salaries in south-eastern states (see Exhibit C7).

Exhibit C7. Average annual K–12 teacher salaries, 2003–2017 (in constant* 2017 dollars)



Source: National Education Association, *Estimates of School Statistics*, selected years, 2004–05 through 2016–17

* Constant dollars are based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor. ** Southeastern states include Alabama, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

In the 2017–18 school year, beginning teachers' average starting salaries in North Carolina were 29th in the nation, at \$37,631 (National Education Association, 2018a and 2018b). Overall, the average salary for teachers in North Carolina ranks 37th in the nation, \$50,861 versus the national average teacher salary of \$60,483 (National Education Association, 2018a and 2018b). Further, although North Carolina once led southeastern states in teacher pay, it now lags most of its neighbors in average pay (see Exhibit C8).

Exhibit C8. Starting teacher salaries and average teacher salaries, 2017–18

Southeastern state	Starting teacher salary	Southeastern state	Average teacher salary
Maryland	\$45,147	Maryland	\$69,761
Virginia	\$40,453	Georgia	\$56,329
Alabama	\$38,491	Kentucky	\$52,952
Florida	\$37,636	Virginia	\$51,265
North Carolina	\$37,631	South Carolina	\$51,027
Tennessee	\$37,305	Tennessee	\$50,900
Kentucky	\$36,752	North Carolina	\$50,861
Georgia	\$35,474	Alabama	\$50,239
Mississippi	\$34,784	Florida	\$47,721
West Virginia	\$33,715	West Virginia	\$45,642
South Carolina	\$33,148	Mississippi	\$43,107
National Average	\$39,249	National Average	\$60, 483

Source: The starting teacher salary data were obtained from a variety of sources, including National Education Association state affiliates, state departments of education, and school district and local affiliate websites. Retrieved from <http://www.nea.org/home/2017-2018-average-starting-teacher-salary.html>. Average teacher salary data were obtained from the National Education Association's (2018) rankings of the states and estimates of school statistics (p. 49, Table E-7). Retrieved from http://www.nea.org/assets/docs/180413-Rankings_And_Estimates_Report_2018.pdf

In interviews, the research team heard about the effects of declining salaries and working conditions throughout the state. One middle school teacher described his situation as follows:

I know people who have worked gas stations at night and teach all day. [I]f I didn't coach those three sports and get extra money from that, I'd have to go work another job.

Another middle school teacher shared her future plans:

I don't [see myself here in five years or in the profession] ... because we're a household of two teachers. It's just not feasible moneywise for both of us to teach.

In addition to drops in salaries, for a period of time North Carolina shrank and then eliminated its North Carolina Teaching Fellows scholarship program, which covered education costs for capable high school students entering teaching. Without financial incentives to enter teaching — incentives that were tied to service commitments — recruitment and retention were both affected. The program is now back in effect, but it is not large enough to meet demand.

In multivariate statistical analyses of the predictors of teacher retention, the research team found that the size of the teacher salary supplement (additional funds provided by some local education agencies to account for such variances as geographic location, market conditions, and school demographics) was a significant predictor, as were a number of working conditions (reported by teachers in the Teacher Working Conditions Survey, which is

administered annually to teachers in North Carolina schools). Working conditions predictive of teacher retention include teacher and school leadership, professional learning and collaboration, community support and parent engagement, teachers' collective practice and efficacy, time for teaching, and student conduct.

It is worth noting that having student assessment data available to impact instruction has a negative association with teacher retention. It may be that schools with a strong focus on assessment are those in which there is significant pressure to raise scores — as is often the case in low-scoring schools that serve concentrations of students in poverty. This pressure may encourage higher teacher attrition. An earlier study in North Carolina found that the rating system associated with the state's accountability system triggers higher attrition of teachers from schools that receive a low rating, holding other factors constant (Clotfelter, Ladd, Vigdor, & Aliaga-Diaz, 2004).

Similarly, in the national Schools and Staffing Survey, the most frequently given reason for leaving the profession in 2012, during the No Child Left Behind era, was dissatisfaction with student testing and accountability, cited by 25% of teachers who left.

Almost all of these factors have even stronger associations with teacher retention in high-poverty schools. As teachers discussed their working conditions in interviews, the research team heard concerns such as these:

"They try to address it, but, unfortunately, funding is not there — that's what we are told. For instance ... we don't have textbooks — we need to make copies of reading selections to teach those kids. We only get, like, 1,500 copies per nine weeks ... we [use] our own money, we have to buy cartridges for our printers to print this." (Middle school teacher)

"I do enjoy being in the classroom, but this is a very high-stress environment in general. ... While I love what I do ..., I can't justify it and say it's worth it. It's not a long-term thing. ... There's no way I can sustain this for a long time." (Middle school teacher)

"I just feel like I can't teach at this rate for 25 years. ... Yeah, I would say burnout is real." (Middle school teacher)

This study's analysis found that teaching and learning conditions are also powerful in predicting the likelihood of a school exceeding its growth target on the state assessments, relative to not meeting the target. Across all schools, teachers' collective practices and efficacy and student conduct are positively associated with meeting expected growth (relative to not meeting growth). These two factors also predict the school's probability of exceeding its growth target, as do teacher and school leadership, community support and parent engagement, time for teaching, and student assessment data. There are not major differences between low- and high-poverty schools in how school working conditions predict expected growth status on the Education Value-Added Assessment System.

In addition, a school's likelihood of exceeding its growth targets is strongly associated with having a higher teacher-to-student ratio, having a greater proportion of National Board–certified teachers, and having greater total per-pupil expenditures. This suggests that fiscal and human resources matter to schools' abilities to support growth in student achievement. Unfortunately, the proportion of National Board–certified teachers is three times higher in low-poverty schools than in high-poverty schools, at 15% and 5%, respectively. Since 2009, the proportion of such teachers has declined in high-poverty schools and increased in low-poverty schools (though is lower in low-poverty schools than the high point of 18% in 2012).

Current Status of School Leadership Workforce

Results from a survey of North Carolina principals, administered by WestEd in fall 2018, revealed the importance of leadership in improving teacher retention and school performance. These findings were consistent with a growing number of studies, including studies on how principals matter in creating positive working conditions. It is worth noting that the survey items addressing aspects of leadership that were most strongly related to teacher retention are those most focused on teachers' roles as leaders, such as the following:

- » Teachers have influence on decision-making.
- » Teachers are trusted to make sound professional decisions.
- » Teachers are relied upon to make decisions about educational issues.
- » Teachers are encouraged to participate in school leadership roles.
- » Teachers are recognized as educational experts.
- » The faculty has an effective process to solve problems.

These indicators suggest that good principals value teachers' participation in decision-making and problem solving and understand how to create conditions for distributed leadership. Teachers clearly want to be in schools that tackle problems collectively and in which they can work as a team to make sound professional decisions.

Other studies using Teacher Working Conditions Survey data from North Carolina have shown that teacher ratings of their teaching and learning conditions depend on which principal is leading the school, independent of other school and district contextual factors.

Principals serve as gatekeepers to teacher involvement in decision-making, collaboration, and instructional support — all conditions that lead to teachers' collective efficacy, which predicts retention and, ultimately, effectiveness. Principals also determine much of the context for student learning. Thus, having skillful, well-prepared principals in all schools is a critical aspect of students' learning opportunities.

Principal demand has been increasing, supply is declining, and shortages are emerging

As with teachers, there was a noticeable decrease — about 10% — in the number of school building administrators in North Carolina between 2011 and 2012. The number has slowly increased, but remains below the number serving the system in 2008. Due to high turnover rates, however, there is a recurring need to fill large numbers of vacancies. And demand is expected to increase: The U.S. Bureau of Labor statistics estimated an almost 9% increase in the overall need for elementary and secondary school administrators (both district and site leaders) and a 14% increase in the overall workforce for preschool and child care administrators. Most of this demand (75% in elementary and secondary and 80% in early childhood education) will be due to turnover. If these projections are correct, the number of total openings to be filled between 2014 and 2024 will comprise more than one third of the workforce (see Exhibit C9).

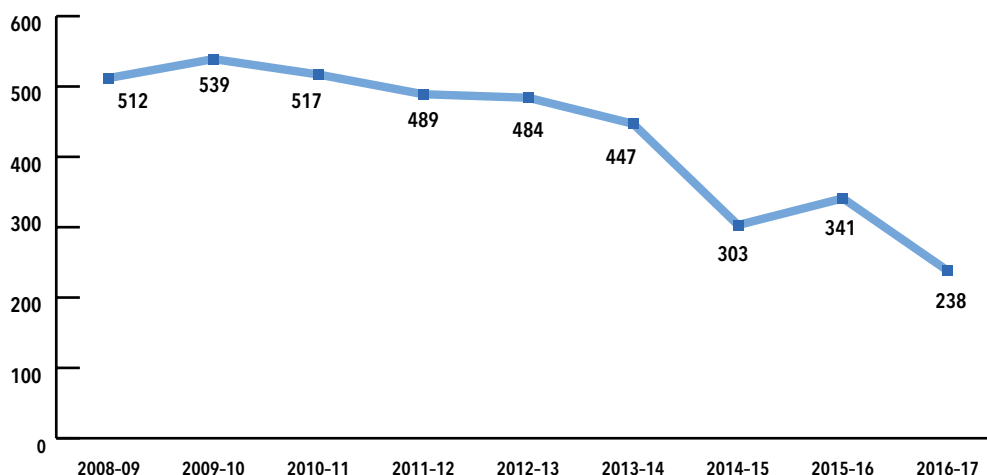
Exhibit C9. Projections for North Carolina education administrator workforce needs, 2014–2024

Occupation title	Employment estimate, 2014	Employment estimate, 2024	Net change	Percent change	Annualized growth rate	Total openings growth	Total openings replacement	Total openings
Preschool and child care center / program administrator	1,413	1,609	196	13.87	1.31	96	411	607
Elementary and secondary school principal	7,404	8,045	641	8.66	0.83	641	2,153	2,794

Source: Bureau of Labor Statistics, *Occupational Employment Statistics*

Although the annual need for high-quality principals is high, the current supply in North Carolina appears limited. Traditionally, the University of North Carolina (UNC) system has been the primary source of principals for North Carolina public schools. However, between 2008 and 2016, the UNC system provided a steadily declining number of new principals, producing 56% (301) fewer principals in 2016–17 than it produced in 2009–10 (539) (see Exhibit C10). The UNC system’s share of the principal workforce also declined, from a high of 53% in 2010–11 to a low of 43% in 2017–18.

Exhibit C10. UNC-system-prepared principals, 2008–09 through 2016–17



Source: North Carolina Department of Public Instruction; UNC System Office; Educational Policy Initiative at Carolina, UNC

Not all of the principals who have been prepared end up entering administrative positions. One of the most productive pathways in North Carolina is the state-funded Principal Fellows program, whose graduates are much more likely to take administrative positions immediately after their training — about twice as many as graduates from other UNC master of school administration (MSA) or add-on programs (see Exhibit C11). By three years after their training, nearly 80% of Principal Fellows have become administrators — again about twice as many as those from other pathways. And only 14% of Principal Fellows have left teaching or administration in the state by three

years after graduation, as compared with 24% of all UNC system administrative graduates and 29% of add-on program graduates.

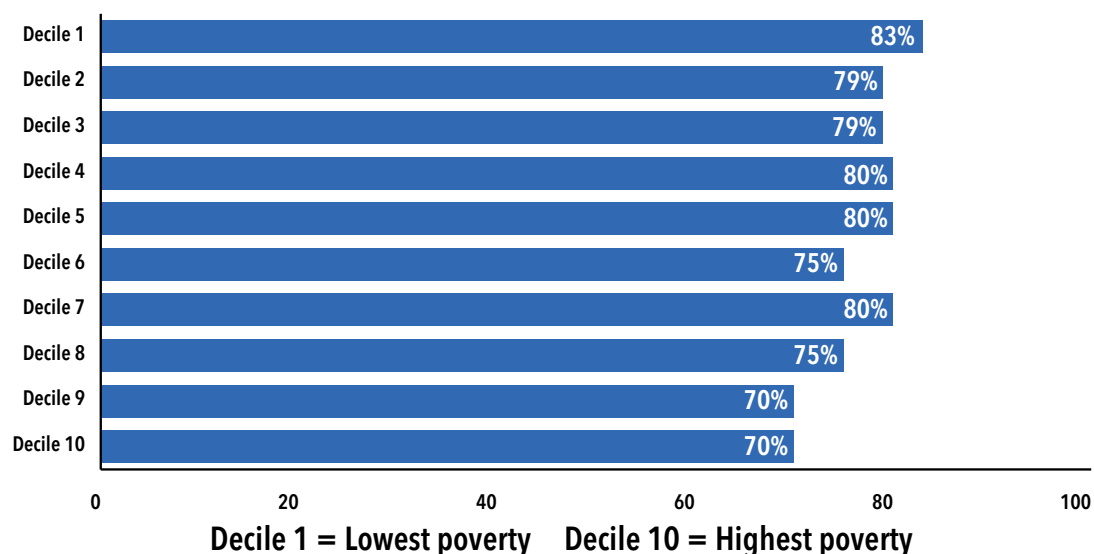
Exhibit C11. Graduates of principal preparation programs, first-year positions and third-year positions

Administrator preparation program	First-year positions: Assistant principal / principal	Third-year positions: Assistant principal / principal	Not working in the state
UNC system (combined)	37% / 2%	36% / 10%	24%
NC Principal Fellows	66% / 2%	63% / 15%	14%
Other UNC MSA	34% / 2%	34% / 9%	24%
Add-on	27% / 2%	27% / 10%	29%
UNC system (no add on)	39% / 2%	39% / 10%	22%

Source: North Carolina Department of Public Instruction; UNC System Office; Educational Policy Initiative at Carolina, UNC

Not surprisingly, principals are more likely to stay in low-poverty schools than in higher-poverty schools. Although 83% of principals in the lowest-poverty schools stayed in their same school for 2017, only 70% of principals in high-poverty schools remained in the same school (see Exhibit C12). Research confirms that turnover of principals is associated with lower student achievement (Levin & Bradley, 2019).

Exhibit C12. Percentages of North Carolina public school principals who stayed in their school, by school poverty decile, 2017



Source: North Carolina Department of Public Instruction; UNC System Office; Educational Policy Initiative at Carolina, UNC

In the 2017–18 school year, principals who moved to new schools tended to move to schools that had lower percentages of economically disadvantaged students, stronger academic performance (as reflected in the North Carolina Department of Instruction’s performance composite), and slightly larger principal salary

supplements. The departure of principals from schools with economically disadvantaged students may also be related to issues of salaries and working conditions.

Factors Influencing Principal Attrition

The factors influencing principal supply are similar to those that influence teacher supply.

Across national and local studies, researchers have identified several factors that influence principal turnover, with access to professional learning and competitive compensation as chief factors among these (Levin & Bradley, 2019).

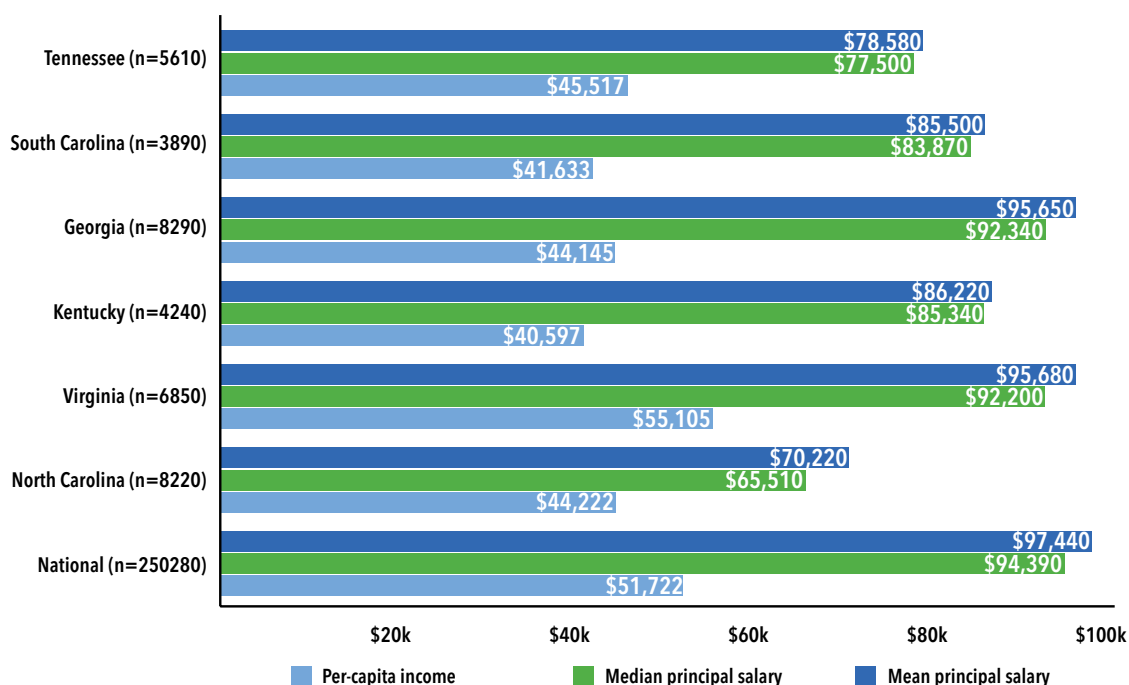
Professional learning. Studies have found that access to high-quality preparation programs with principal internships and mentoring significantly reduce the likelihood that principals will leave their schools and the profession (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005; Tekleselassie & Villarreal, 2011). As we noted earlier, principals prepared in the North Carolina Principal Fellows program — which offers internships, mentoring, and high-quality coursework — enter and stay in the profession at higher rates than those from other pathways.

Professional learning experiences are highly variable. In a 2018 survey of principals in North Carolina, about one third of principals reported feeling their leadership program prepared them well to lead instruction that helps students develop higher-order thinking skills, which raise achievement on standardized tests. Similarly, one third felt they had been well prepared to select effective curriculum strategies and materials, and about 29% felt well prepared to lead instruction that supports implementation of the new standards. More than one in five responding principals said that they were “poorly” or “very poorly” prepared to lead instruction in these areas. We can anticipate that principals’ sense of their preparation and efficacy may impact their retention.

Salaries. Research notes that principal attrition and mobility are associated with salary levels (Baker, Punswick, & Belt, 2010; Grissom & Bartanen, 2018; Tran & Buckman, 2017). As this study also found, North Carolina principals tend to move to schools with greater salary supplements.

Low salaries are also a deterrent to entering and staying in the profession in the state. In 2017, the average principal salary in North Carolina was \$27,220, 28% less than the national average. Among nearby south-eastern states, including two whose per-capita income is lower than North Carolina’s, the mean and median salaries for North Carolina principals were the lowest. Mean North Carolina principal pay in 2017 was \$25,460, 27% lower than principal pay in neighboring Virginia (see Exhibit C13).

Exhibit C13. Mean and median salaries for secondary and elementary school principals in southeastern states, 2017



Source: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, retrieved from [https://www.bls.gov/oes/current/oes119032.htm#\(3\)](https://www.bls.gov/oes/current/oes119032.htm#(3)); Federal Reserve Bank of St. Louis, Economic Research, retrieved from <https://fred.stlouisfed.org/>

In the principal survey conducted for this study, nearly one in four responding principals (24%) identified compensation as the major factor that would cause them to leave their position in the next three years. When asked about North Carolina's compensation policy, which eliminates consideration of experience in favor of pay based on school performance, 44% of responding principals reported that they "oppose" or "strongly oppose" the policy. About 24% reported that as a result of the policy, they would: "seek to retire as soon as possible," "leave to obtain principalship in another school," or "leave the principalship." Approximately 28% of responding principals "strongly agreed" or "somewhat agreed" with the statement "If I could get a higher-paying job, I'd leave education as soon as possible."

Conclusion

This study's research shows that a number of factors are undermining the ability of the state system to meet the expectations of the *Leandro* ruling with respect to qualified and competent teachers and principals. Dwindling supply leading to extensive shortages — especially in high-poverty communities — means that many students are taught by teachers and leaders who are not prepared. High turnover in these same communities creates churn that impedes school improvement efforts. Underlying causes include inadequate preparation and mentoring for a growing proportion of recruits, noncompetitive and unequal salaries, and poor working conditions. Punitive accountability also contributes to high attrition in high-poverty schools, which are most likely, under current conditions, to be identified as failing.

Yet North Carolina still has some important assets for rebuilding its professional infrastructure, not only in the form of strong recruitment and training programs, such as the North Carolina Teaching Fellows and Principal Fellows programs, but also with the strengths of the UNC training system, which produces more effective and long-lasting professionals for the state's schools. Building on and expanding these and other assets will be an important part of the solution to remedying the inadequacies and inequalities that currently exist.

References

- Baker, B. D., Punswick, E., & Belt, C. (2010). School leadership stability, principal moves, and departures: Evidence from Missouri. *Educational Administration Quarterly*, 46(4), 523–557.
- Clotfelter, C. T., Ladd, H. F., Vigdor, J. L., & Aliaga-Diaz, R. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Policy Analysis and Management*, 23(2), 251–271.
- Darling-Hammond, L., Bastian, K., Berry, B., Carver-Thomas, D., Kini, T., Levin, S., & McDiarmid, W. (2019.) *Educator supply, demand, and quality in North Carolina: Current status and recommendations*. Palo Alto, CA: Learning Policy Institute.
- Davis, S., Darling-Hammond, L., LaPointe, M., & Meyerson, D. (2005). *Review of research. School leadership study: Developing successful principals*. Palo Alto, CA: Stanford Educational Leadership Institute.
- Dee, T. (2004). Teachers, race, and student achievement in a randomized experiment. *The Review of Economics and Statistics*, 86(1), 195–210.
- Gershenson, S., Hart, C. M. D., Lindsay, C. A., & Papageorge, N. W. (2017). *The long-run impacts of same-race teachers* (IZA Institute of Labor Economics discussion paper series).
- Grissom, J. A., & Bartanen, B. (2018). Principal effectiveness and principal turnover. *Education Finance and Policy*, 1–63.
- Henry, G. T., Purtell, K. M., Bastian, K. C., Fortner, C. K., Thompson, C. L., Campbell, S. L., & Patterson, K. M. (2014). The effects of teacher entry portals on student achievement. *Journal of Teacher Education*, 65, 7–23.
- Ingersoll, R., Merrill, L., & May, H. (2014). *What are the effects of teacher education and preparation on beginning teacher attrition?* Research report (#RR-82). Philadelphia, PA: University of Pennsylvania Consortium for Policy Research in Education.
- Levin, S., & Bradley, K. (2019). *Understanding and addressing principal turnover: A review of the research*. Reston, VA: National Association of Secondary School Principals & Palo Alto, CA: Learning Policy Institute.
- National Education Association. (2018a). 2017–2018 Average starting teacher salaries by state. Retrieved from <http://www.nea.org/home/2017-2018-average-starting-teacher-salary.html>
- National Education Association. (2018b). Rankings of the states 2017 and estimates of school statistics 2018, p. 26, Table B-6. Retrieved from <http://www.nea.org/home/73145.htm>
- National Education Goals Panel. (1999). *The National Education Goals report: Building a nation of learners, 1998*. Washington, DC: U.S. Government Printing Office.
- Podolsky, A., Kini, T., & Darling-Hammond, L. (In press). Does teaching experience increase teacher effectiveness? A review of the research. *Journal of Professional Capital*.
- Public Schools of North Carolina, North Carolina State Board of Education, & North Department of Public Instruction. (2019). *Report to the North Carolina General Assembly, 2017–2018 state of the teaching profession in North Carolina, General Statute § 115C-12(22)*. Raleigh, NC: North Carolina Department of Public Instruction. Retrieved from <http://www.ncpublicschools.org/docs/district-humanresources/surveys/leaving/2017-18-state-teaching-profession.pdf>
- Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4–36.
- Tekleselassie, A. A., & Villarreal, P. (2011). Career mobility and departure intentions among school principals in the United States: Incentives and disincentives. *Leadership and Policy in Schools*, 10(3), 251–293.
- Title II Higher Education Act. (2018). *2018 Title II reports: Academic year 2016–17 data*. Retrieved from <https://title2.ed.gov/Public/Home.aspx>
- Tran, H., & Buckman, D. G. (2017). The impact of principal movement and school achievement on principal salaries. *Leadership and Policy in Schools*, 16(1), 106–129.

Appendix D. Attracting, Preparing, Supporting, and Retaining Education Leaders in North Carolina

The 1997 decision in *Leandro v. the State of North Carolina (Leandro)* and the subsequent 2004 ruling in *Hoke County Board of Education v. the State of North Carolina (Leandro II)* determined that “every child in North Carolina has a constitutionally enforceable right to an opportunity for a sound basic education in a public school,” in that the following are required (*Leandro II*, 2004):

- » Every child is entitled to have a competent teacher.
- » Every school must have a competent principal.
- » Every school district must have the resources necessary to adequately support these students, teachers, and principals.

With regard to the second requirement, that of competent principals, WestEd conducted research on the current status of education leadership in North Carolina and on evidence-based best practices related to education leadership. This research is summarized in the findings and forms the basis of the conclusions contained in this report.

Approach and Methods

WestEd’s research team conducted data collection and analyses to examine evidence-based practices, identify key findings, and develop conclusions about the current status of education leadership in North Carolina. The WestEd team identified the following key research questions to guide their work:

- » What is the current status of leader supply and demand?
- » What is being done to attract and prepare leaders?
- » What is being done to develop and support leaders?
- » What is being done to retain leaders?
- » What structures and processes are in place to support school improvement?

The WestEd team collected data from multiple sources, including:

- » Results from an online survey that was completed by 685 principals from across North Carolina
- » Face-to-face interviews with public sector leaders and stakeholders with in-depth knowledge of the education leadership landscape in the state

- » Focus groups with 50 local school district superintendents, 33 local school board members, and 5 (of the 8) Regional Education Service Agency directors;
- » Site visits to 13 school districts, during which team members interviewed multiple principals
- » Reviews of research and literature about evidence-based practices from national sources, as well as reviews and evaluations of North Carolina–specific programs
- » Reviews of presentations made to the North Carolina Governor’s Commission on Access to a Sound Basic Education

Findings

The data analyses highlighted common themes that emerged across numerous data sources. Based on the research questions outlined above, the findings are organized around the following themes: determining leader supply and demand, preparing leaders, attracting leaders, developing and supporting leaders, retaining leaders, and improving schools.

Determining leader supply and demand

According to analyses of enrollment data from principal preparation programs, as well as opinions of education leaders, the supply of qualified principals in North Carolina is declining. Education leaders who participated in focus groups and interviews opined that legislative changes to principal salary schedules have discouraged potential candidates from entering school leadership positions because they can often earn more money as teachers.

Preparing leaders

North Carolina currently offers multiple pathways to principal licensure. Depending on where they live, aspiring principals can choose from the following routes:

1. **University of North Carolina master’s of school administration degree** (UNC MSA)
2. **North Carolina Principal Fellows:** A program that provides scholarship funding to support individuals during a two-year full-time UNC MSA program in return for a four-year commitment to work in North Carolina schools
3. **UNC add-on:** An add-on (nondegree) principal license from a UNC system institution
4. **North Carolina private MSA:** An MSA from a private or independent college or university in North Carolina
5. **North Carolina private add-on:** An add-on (nondegree) principal license from a private or independent college or university in North Carolina

6. **Regional Leadership Academy license:** A principal license earned from one of three leadership academies (the Northeast Leadership Academy, the Piedmont-Triad Leadership Academy, or the Sandhills Leadership Academy)
7. **Out-of-state license:** A principal license earned through a program outside North Carolina

Results from WestEd’s online Principal Survey showed that the majority of principals received their training through in-state programs, specifically UNC system programs. As such, where aspiring principals live can determine whether or not they have access to high-quality preparation programs.

Two of North Carolina’s pathways to licensure, North Carolina State University’s Educational Leadership Academy (NELA) and the Transforming Principal Preparation Program (TP3), meet the standards outlined in *Quality Measures™ Principal Preparation Program Self-Study Toolkit* (King, 2018). These standards are: selective candidate admission, rigorous course content, varied pedagogy, embedded clinical practice, performance assessment, and tracking of graduate performance outcomes. Schools with principals who have completed the NELA demonstrated positive increases in student performance (North Carolina State University, 2019).

Attracting leaders

Many education leaders and stakeholders who participated in interviews or focus groups noted that it is often more difficult to attract principals than it is to attract teachers, especially in rural districts. A significant contributing factor may be North Carolina’s new compensation policies for school administrators. According to these policies, school administrators are no longer eligible for advanced degree and doctoral supplements to their salaries. Also, after January 21, 2021, new administrators (and other educators) will not receive health benefits in retirement. In addition, administrators and teachers no longer receive credit for years of experience beyond 16 years, according to the salary schedule published by the North Carolina Department of Public Instruction (NCDPI).

Developing and supporting leaders

Leaders in North Carolina have a variety of professional development opportunities from which to choose, including professional development offered by individual districts as well as the following programs:

- » Distinguished Leadership in Practice (DLP)
- » Future Ready Leadership
- » Leadership in Personalized and Digital Learning

Although these programs are well received in the field, sufficient data are not available to determine their impact on teaching and learning or on principal retention. The content of these programs addresses many needs of practicing school administrators. However, it is not clear if/how they address the needs identified by principals on the Principal Survey, such as preparing principals to lead schools that support students’ social and emotional development. As with access to high-quality preparation programs, administrators’ locations can determine whether or not they have access to high-quality professional development opportunities.

Retaining leaders

Analyses of 2016–17 data provided by the NCDPI show that North Carolina districts with higher principal turnover rates, fewer experienced principals, and fewer principals with advanced degrees than state averages tend to be the lowest-wealth, highest-poverty districts, which are the districts most in need of a stable, experienced, and highly qualified principal workforce. When asked on the Principal Survey what would cause them to leave the principal role in their current schools in the next three years, 24% of principals cited compensation as the primary factor. Based on interviews, focus groups, and other feedback, stakeholders believe that the responsibility for retaining effective leaders falls primarily on districts and schools. In the absence of significant funding, schools and districts in North Carolina must rely on facilitating a culture of valuing and supporting their administrators in order to keep effective school leaders.

Improving schools

Principals responsible for improving schools need training and assistance to lead the changes in practice that are often necessary to improve student outcomes. However, principals in North Carolina do not currently have consistent access to training or assistance in the area of school turnaround. From 2010 through 2014, a portion of North Carolina’s \$400 million Race to the Top (RttT) grant enabled the NCDPI to intervene in an effort to improve performance in the lowest-achieving 5% of North Carolina’s schools — approximately 118 elementary, middle, and high schools. Results indicated that this intervention made a significant contribution to improved student test scores in the high-need schools it served. Unfortunately, these efforts largely disappeared when RttT funding ceased. In the NCDPI’s current approach to supporting high-need schools, Comprehensive Support and Improvement schools and Targeted School Improvement schools must use the web-based tool NCStar to satisfy the requirements of the School Improvement Plan (SIP). The SIP is intended to be a living document that drives the day-to-day activities and operation of a school. However, when asked on the Principal Survey about school improvement processes and structures, 32% of principals responded that “the SIP is just another required document.”

Additional stakeholder feedback gathered during interviews and focus groups indicates that principals are virtually unsupported by the state when it comes to turning around schools. Since the RttT funding ended, the transformational support from the NCDPI has been scaled back every year. With RttT funds, the state was able to pay professional development stipends for leaders who served low-performing schools and turned them around. Without RttT funds, this is no longer the case. Interviewees and focus group participants believe the state needs to increase regional support and high-quality training for leaders of low-performing schools.

Conclusions

The likelihood that North Carolina will meet the *Leandro* requirement for ensuring that there is a competent principal in every school will be strengthened by the state’s carrying out the following actions:

- » Revising the state compensation system for school administrators and providing financial incentives for principals working in low-performing and high-poverty schools

- » Expanding access to high-quality principal preparation programs aligned to national standards to more candidates in all regions of the state
 - The NELA and the TP3 provide models on which the state can build.
- » Developing a systemic statewide approach to professional development for school administrators that provides professional development opportunities for administrators at all stages of their careers, with specific research-based training and support that is differentiated according to varying conditions and needs
 - Programs currently offered by the North Carolina Principals and Assistant Principals Association, such as DLP and FRL, can serve as models to be expanded, scaled, and/or replicated throughout the state.
- » Adopting a statewide framework for school improvement and implementing a statewide system for improving underperforming schools
 - One component of this system should be a leadership academy for administrators serving in low-performing, high-need schools and districts.
- » Committing to a process of continuous improvement
 - This can be carried out by monitoring and evaluating the effectiveness of new initiatives, improving initiatives based on monitoring/evaluation results, and maintaining and scaling effective practices.
- » Building and maintaining one or more principal pipelines using elements identified above to ensure a supply throughout the state, for now and into the future, of high-quality principals trained in programs that are aligned to the highest standards

References

Hoke County Bd. of Ed. v. State, 358 N.C. 605, 599 S.E.2d 365 (2004).

King, C. (2018). *Quality Measures™ principal preparation program self-study toolkit: For use in developing, assessing, and improving principal preparation programs* (10th ed.). Waltham, MA: Education Development Center, Inc.

Leandro v. State, 346 N.C. 336, 488 S.E.2d 249 (1997).

North Carolina State University. (2019). *NC state principal preparation: NELA performance*. Raleigh, NC: Author. Retrieved from <https://nela.ced.ncsu.edu/results/>

Appendix E. High-Quality Early Childhood Education in North Carolina — A Fundamental Step to Ensure a Sound Basic Education

In 2004, *Hoke County Board of Education v. the State of North Carolina (Leandro II)* found that the state of North Carolina was required to address the needs of at-risk prospective enrollees in the state’s public education system as part of its requirement to ensure access to a sound basic education. The case found that the state — both the executive branch and the legislative branch — had the obligation to devise constitutionally acceptable remedies to the failure of the current system to meet that standard:

We read Leandro and our state constitution, as argued by plaintiffs, as according the right at issue to all children of North Carolina, regardless of their respective ages or needs. Whether it be the infant Zoe, the toddler Riley, the preschooler Nathaniel, the “at-risk” middle schooler Jerome, or the not “at-risk” seventh grader Louise, the constitutional right articulated in Leandro is vested in them all. (Leandro II, 2004)

This study examined the current status of high-quality early childhood education in North Carolina. Specifically, it seeks to diagnose whether, where, and why low-income students do and do not have access to high-quality early childhood education programs. This brief highlights opportunities in the state that could inform a plan of action to make high-quality Pre-K education available as part of the state’s provision of a sound basic education to all North Carolina children.

Approach

To examine early childhood education access and barriers in North Carolina, the research team derived the following set of research questions:

- » What is the status of early childhood programs in North Carolina?
- » Do North Carolina’s economically disadvantaged young children have access to and participate in high-quality early childhood programs? Does access and participation differ by locale?
- » What barriers prevent economically disadvantaged children from having access to and participating in high-quality early childhood programs?
- » What capacities and opportunities exist in North Carolina today that could be built upon to ensure that economically disadvantaged children have access to and participate in high-quality early childhood programs?

To answer the research questions, the research team reviewed the findings of existing research and generated new information based on further analyses of existing quantitative data and of new qualitative data collected specifically for this study.¹ The datasets used in the analyses include the following:

- » County distress rankings from 2018 (North Carolina Department of Commerce, n.d.)
- » Data on percentage of children aged 0–17 in poverty (U.S. Department of Agriculture Economic Research Services, n.d.)
- » Data about food insecurity from 2016 (Feeding America, 2018)
- » Data on the 2016–2017 12-month county employment figures (North Carolina Department of Commerce, n.d.)
- » County-level data on the 2017 population of North Carolina by race and ethnicity (U.S. Census Bureau, 2017)
- » Child Care Analysis Summary (North Carolina Department of Health and Human Services, 2018)

The research team also gathered a substantial amount of stakeholder input from participants in the North Carolina Early Childhood Action Plan group and the Pathways to Grade-Level Reading group. Participants involved in these two groups collectively comprise a rich group of Pre-K and child care stakeholders. Our research team also conducted extensive document analyses of information these two groups have produced. Further, WestEd served as a presenter and observer in the Governor Commission’s Early Childhood work group at which additional data on early childhood education were presented. Finally, the findings were informed by a new review of the effectiveness of early childhood education in terms of academic, behavioral, and financial outcomes, which included a focus on North Carolina schools (Belfield, 2019).

Benefits of Early Childhood Education

Both national studies and studies focused specifically on North Carolina provide a growing base of solid evidence about the value and legitimacy of high-quality early childhood education to build a strong foundation for learning. A recent review of this evidence by the National Institute for Early Education Research at Rutgers University found that high-quality preschool can improve child health in three ways:

1. High-quality preschool can directly improve children’s physical and mental health through the establishment of such positive habits as eating heart-healthy foods, having balanced diets, and exercising through active play.
2. High-quality preschool has positive effects on parents, including on their mental health, their parenting skills, and their health knowledge.
3. High-quality preschool can significantly improve children’s socioemotional skills and cognitive skills in the short term, particularly for low-income and dual-language children, which can lead to improved health as adults (Friedman-Krauss, Bernstein, & Barnett, 2019).

¹ Primary analysis was conducted by Jennifer Brooks, an independent consultant on the project.

Additional research has examined the benefits of full-day preschool compared with part-day programs. Research on the Child-Parent Center Education Program in Chicago showed that full-day preschool was associated with higher scores on four of six school readiness skills — language, mathematics, socioemotional development, and physical health — as well as increased attendance. Full-day services also provide parents with more time to pursue career and educational opportunities that can benefit their family. The positive results associated with full-day preschool strongly suggest that in efforts to expand Pre-K access, programs should consider a higher dosage of services (Reynolds et al., 2014).

Not only does high-quality preschool improve child health, but it also can result in long-term financial benefits. The research studies that follow children through adolescence demonstrate that preschool participation can positively impact grade retention and special education placement, which not only benefit children, but also can produce cost savings for schools. In addition, skill development at an early age is critical (Heckman, Pinto, & Savelyev, 2013). Children who enter school without the skills learned in early education settings get tracked into lower-quality classes and skills and may receive fewer learning resources, contributing to their falling further behind (Belfield, 2019).

Further, studies have shown that preschool participation can generate cost savings for society as a whole due to increased graduation rates and educational attainment (Meloy, Gardner, & Darling-Hammond, 2019). Economic studies conducted over the past 12 years find that the economic benefits of investing in early childhood education are at least double the economic costs (Barnett & Masse, 2007; Karoly, 2016). Results from these studies have shown specifically that providing early childhood education for disadvantaged students has even higher economic returns than doing so for the general population.

Early Childhood Education Landscape in North Carolina

In North Carolina, the two main state-funded early childhood education programs are Smart Start and NC Pre-K. Research indicates that although both have seen positive impacts on children and communities, program funding has declined steadily over the last decade.

Smart Start. In 1993, North Carolina developed a public-private partnership called Smart Start, which expanded to all 100 counties in the state by 1997. Smart Start is a network of 75 nonprofit agencies that offer a “one-stop shop” resource that coordinates early education services for families with children aged 0–5. As part of Smart Start, the nonprofit agencies offer families such services as parenting classes, child care program consulting, and case management or referral, as well as providing administrative oversight and strategic planning for early childhood programs. Smart Start partnerships also offer services that particularly target at-risk or low-income children and families, such as collaborating with Medicaid providers to offer health screenings.

When Smart Start began in 1993, it was a \$32 million pilot serving families in 12 congressional districts and 18 counties. The initiative continued to grow over the years, with Smart Start funding peaking in 2000 at \$310 million and remaining above \$200 million for about the next 10 years. Then the North Carolina Department of Health and Human Services applied budget reductions to Smart Start funding each year following the Great Recession of 2008. In 2011, the state legislature imposed a 20% budget cut on Smart Start, bringing the annual funding levels to less than \$150 million, which is the lowest amount of funding since the 1998 fiscal year. Although North

Carolina's economy has been steadily improving, adequate Smart Start funding has not been restored (Wechsler et al., 2016).

NC Pre-K. North Carolina's Pre-K program, initially called More at Four, then renamed NC Pre-K, was designed to provide a high-quality educational experience both for 4-year-old children from primarily low-income families and for children with developmental and learning disabilities, chronic health conditions, and limited English proficiency. This state-supported program currently enrolls just over 29,500 children (approximately 23% of North Carolina's 4-year-olds) in its mixed-delivery system of public schools, private centers, and Head Start centers (Barnett, 2019). About half of all the NC Pre-K slots are delivered through private, community-based programs, including nine-month and part-day programs. NC Pre-K is funded by the state at approximately \$154 million. However, the state funding is not intended to fully cover the costs of the NC Pre-K program — it covers about 60% and relies on individual counties to contribute the remaining 40% (Barnett, 2019). Although spending per child is fairly comparable with Head Start, the program spends approximately \$2,000 less per child than is spent in the K–12 system (Belfield, 2019).

In order to qualify for NC Pre-K, an age-eligible child must also be:

- » from a family whose gross income is at or below 75% of the state median income (SMI), or \$52,000 per year for a family of four or
- » in an active-duty or other military family, regardless of income.

In addition, up to 20% of age-eligible children enrolled may have family incomes more than 75% of the SMI if they have documented risk factors in certain areas, such as developmental or learning disabilities, limited English proficiency, or chronic health conditions.

Findings

Evidence of Early Childhood Education Effectiveness in North Carolina

There have been multiple research studies showing the impact of Smart Start and NC Pre-K on a variety of outcomes and on the program's sustainability, as well as studies and evaluations on other state-provided child care subsidies and state-supported programs. Overall, the quality of the NC Pre-K program appears to be high, as it meets 8 of 10 quality benchmarks established by the National Institute for Early Education Research (Belfield, 2019). Earlier studies evaluating NC Pre-K (including in its previous iteration as More at Four) and Smart Start (Dodge, Bai, Ladd, & Muschkin, 2017; Muschkin, Ladd, & Dodge, 2015; Ladd, Muschkin, & Dodge, 2014) found substantial gains for participating children. By fifth grade, a child who participated in the combination of Smart Start and More at Four had 6.2 cumulative months of academic gains in reading and 3.3 in math. The study also found that there were significant reductions in both grade retention and special educational placement associated with early childhood education participation. The most recent analyses found that academic gains persisted through the middle school (Dodge, Bai, Ladd, & Muschkin, 2019).

Despite the Great Recession of 2008 and budget restrictions across the state, North Carolina has been able to maintain the high quality of both Smart Start and NC Pre-K, according to many years of evaluation findings from the Frank Porter Graham Child Development Institute, a research organization at the University of North Carolina at Chapel Hill. The institute's studies showed specifically that NC Pre-K student gains exceeded expected developmental benchmarks in language and literacy, mathematics, general knowledge, and behavior skills, especially for dual language learners and low-income students (Wechsler et al., 2016). Researchers at Duke University found that NC Pre-K not only raises mathematics and reading test scores, but also demonstrates reduced rates of grade repetition through elementary school. Further, these positive effects were shown to have either held steady or significantly increased through at least fifth grade (Barnett, 2019).

Research studies also demonstrate that children who participated in Smart Start entered elementary school with better math and language skills as well as fewer behavioral problems compared with their peers who did not participate in Smart Start (Ponder, 2010). Both the Smart Start program and the NC Pre-K program have been found to significantly reduce the likelihood of special education placement in third grade (Muschkin, Ladd, & Dodge, 2015).

Limited Access to High-Quality Early Childhood Education

Although early childhood education in North Carolina has been shown to be high quality and to contribute to positive outcomes for children, many disadvantaged families are unable to afford the cost of an early childhood education program. Often, parents pay about two thirds of all the early childhood education costs, and more than 50,000 children are on waiting lists for state subsidies. For NC Pre-K in particular, funding is made available only for "slots," a slot being the capacity of a site to serve one child for a 10-month, part-day program. NC Pre-K has been funded by the state at the same level since 2012, at an average of \$5,200 per slot.

Unfortunately, there is a shortage of Pre-K slots across North Carolina, and only a small proportion of eligible children can be served. In addition, access to the high-quality early childhood education programs varies dramatically. That is, lower-wealth counties do not have an adequate supply of high-quality early childhood programs to serve all the children aged 0–5 years. According to a recent National Institute for Early Education Research (NIEER) study, NC Pre-K serves only about half of all eligible children in the state (29,000 of 62,000 eligible children). Of the approximately 120,000 4-year-old children in North Carolina, about 50% either do not attend any preschool program or attend unlicensed programs or programs failing to achieve a four- or five-star quality rating through the Quality Rating and Improvement System (Barnett, 2019).

Based on estimates of the total number of children meeting the eligibility criterion for NC Pre-K (62,000), NIEER researchers have subtracted actual enrollment from the estimated number of eligible 4-year-old children to calculate the gap of eligible 4-year-olds per county not enrolled in NC Pre-K. The result is an unmet need estimate of almost 33,000 children per year across North Carolina. This is a conservative estimate, as it looks only at income and does not include other eligibility criteria, including children in active-duty military families who are automatically eligible for NC Pre-K and children whose families are above the income-eligibility level, but meet another criterion, such as a developmental or learning disability, limited English proficiency, or a chronic health condition. Unfortunately, the gap of 33,000 eligible, but unserved children exceeds the number of children on waiting lists, the availability of funded slots, and the current capacity to serve additional eligible children (Barnett, 2019).

Approximately 25 of North Carolina's 100 counties are reaching the target participation rate of 75% or more of eligible children in their county. The remaining 75 counties are not reaching that target, serving less than 75% of eligible children, and about 40 counties are serving less than 50% of children eligible for NC Pre-K. In terms of geographic distribution, the NIEER reports that eligible, but unserved children are disproportionately found in urban communities. However, rural counties have the most inconsistency regarding percentage of eligible children served by NC Pre-K compared with urban or suburban counties. Some rural counties are exceeding the target participation, even serving more than 80% of eligible children. By contrast, some rural counties are serving only 11–20% of eligible children in their counties (Barnett, 2019).

Analyses determined that the 40 counties serving less than 50% of all children eligible for NC Pre-K have slightly higher child poverty rates compared with the average child poverty rate for other counties in the state. On average, 23% of children in these 40 counties are poor, compared with an average of 22% in the other 60 counties (U.S. Department of Agriculture Economic Research Services, n.d.). However, these counties are similar to the average in terms of rates of food insecurity and unemployment (Feeding America, 2018; North Carolina Department of Commerce, n.d.).

The population of the 40 counties that serve less than half of eligible children compared with the population of other counties statewide is more likely to be White and less likely to be African American, Asian, Hispanic, or more than one race (U.S. Census Bureau, 2017). In fact, analyses of racial distribution statewide demonstrate that White children who are eligible for NC Pre-K are less likely to be enrolled than any other racial or ethnic group across North Carolina. The following are percentages of eligible children not served by NC Pre-K, by ethnicity (Barnett, 2019):

- » African American: 35% (5,800 children) not served
- » Hispanic: 41% (4,700 children) not served
- » Asian: 51% (1,100 children) not served
- » White non-Hispanic: 65% (27,000 children) not served

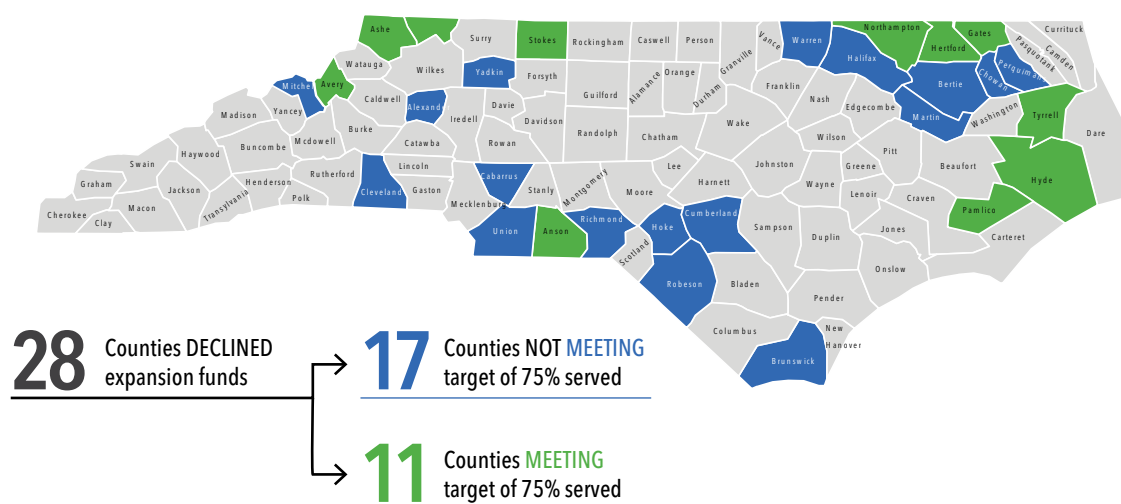
About 73% of all eligible, but unserved children in North Carolina can be found in the 40 counties serving less than 50% of eligible children (U.S. Census Bureau, 2017). The larger population of some of these counties may make it easier to find and transport enough children to fill classrooms than in a rural area. Thus, efforts to expand NC Pre-K in these counties could address a significant portion of the unserved eligible population. At the same time, the size of some of these counties suggests that there may be large within-county variability in NC Pre-K's success in reaching eligible children. If this is the case, then more detailed, nuanced analyses of the number of children eligible for and served by NC Pre-K will be needed at a neighborhood level within those larger counties.

Prior Efforts to Expand Pre-K

North Carolina has taken some actions in an effort to increase access of NC Pre-K to more children across the state. In its 2017–2019 budget, the state increased NC Pre-K funding by \$27.3 million to enroll an additional 3,525 children in the program over two years. For the year 2017, North Carolina was planning to create 1,750 additional slots across the state. The state presented each county with the option to expand its NC Pre-K program by

asking how many additional children the county would like to enroll. The slot requests totaled more than 6,000 across 56 counties for the 1,750 available slots, and the total number of eligible, but unserved children in the 56 counties was more than 24,000. It is worth noting that 44 of the 100 counties declined the NC Pre-K expansion funds. In those 44 counties, more than 9,000 children were eligible for NC Pre-K, but were not being served by the program. Similarly, in 2018, North Carolina was set to expand NC Pre-K by 1,775 slots and again asked each county how many additional children it would like to enroll. There were 5,600 slots requested by 66 counties, and the number of eligible, but unserved children in those counties was approximately 27,000. In addition, 34 of the 100 counties declined the funding to expand their NC Pre-K slots, and in those 34 counties, about 6,000 children were eligible for the program, but not able to be served. As shown in Exhibit E1 below, there were 17 counties that declined expansion funds for both 2017 and 2018 that are also not meeting the target of 75% of eligible children in the county enrolled (Barnett, 2019).

Exhibit E1. Counties that declined expansion funds and that are not meeting target of 75% served, 2017–18 and 2018–19



Source: Barnett (2019)

Analyses suggest that these 17 counties are more economically distressed — as indicated by their rankings in the state Tier Ranking System, as well as by their child poverty, food insecurity, and unemployment rates — than counties statewide. Fifty-nine percent of these 17 counties are classified as Tier 1 in the 2018 North Carolina County Distress rankings, compared with 40% statewide (North Carolina Department of Commerce, n.d.). The child poverty rates are nearly seven percentage points higher in these counties, on average, than in counties statewide, and the food insecurity and unemployment rates are also higher (U.S. Department of Agriculture Economic Research Services, n.d.; U.S. Census Bureau, 2017; Feeding America, 2018; North Carolina Department of Commerce, n.d.).

In addition, people in these 17 counties are more likely to be persons of color than people in the other 82 counties in North Carolina. On average, 65% of residents in these 17 counties are White, compared with an average of 71% in counties statewide. At the same time, individuals in these counties are more likely to be African American,

American Indian, or Alaskan Native and less likely to be Asian or Hispanic compared with the rest of the state (U.S. Census Bureau, 2017).

NIEER researchers found three major explanations for why counties with unmet need declined the expansion funds. First, as the demand for qualified teachers increases, it drives up salaries to produce a corresponding increase in supply. Second, the average cost per child rises when additional children from families who have unstable housing or who require transportation enroll. Third, the availability of nonstate funding and in-kind contributions to supplement state funding declines as programs expand (Barnett, 2019).

Workforce Status

According to the North Carolina Department of Health and Human Services, there were 40,298 North Carolinians working in licensed early childhood settings (serving children from birth through preschool) in December 2018 (North Carolina Department of Health and Human Services, 2018). In 2017, the median hourly wage was \$9.86 for a child care worker and \$12.44 for an NC Pre-K teacher. These numbers are far below the median wages for kindergarten or elementary school teachers in North Carolina in 2017, who made \$25.37 and \$26.03, respectively (Child Care Services Association, 2015). Further, early childhood education teachers typically do not receive benefits. As is the case statewide, North Carolina taxpayer dollars subsidize the low wages of early childhood education employees through other public programs. Thirty-nine percent of both teachers and assistant teachers report that they had received some sort of public assistance (e.g., Medicaid, the Supplemental Nutritional Assistance Program, the Temporary Assistance for Needy Families program, child care subsidies) in the previous three years (Child Care Services Association, 2015). Unsurprisingly, turnover in the early childhood workforce is quite high.

North Carolina's state funding of early childhood education programs also pales in comparison with the state's funding for K–12 education. Early childhood funding is approximately 1% of the annual state budget, whereas K–12 accounts for about 39% of the state budget.

In addition, as of 2015, 64% of lead early childhood teachers in North Carolina did not have an associate's or bachelor's degree in early childhood education. In fact, 38% of lead early childhood teachers did not hold any associate's or bachelor's degree (Child Care Services Association, 2015).

The fact that early childhood teachers have low salaries, especially compared with kindergarten teachers, serves as a major deterrent for those considering entering the field, particularly for the more highly educated candidates. Further, because of the large pay discrepancy between early childhood and kindergarten teachers, many early childhood teachers shift to teaching kindergarten after receiving a bachelor's degree. The median wage of a kindergarten teacher is nearly 2.25 times more — or more than \$17 more per hour — than that of an early childhood teacher.

Promising Practices

North Carolina has made efforts to address the barriers described in this brief to building a strong early childhood education workforce. In fact, two North Carolina programs — the T.E.A.C.H. Early Childhood® Scholarship Program and the Child Care WAGE\$® Program — are nationally recognized for their attempts to reduce the cost

of attaining a higher education degree in early childhood, increase the wage incentive for doing so, and retain a better educated and compensated workforce as a result.

In addition, NC Pre-K has been shown to have very stringent policies related to teacher qualification. Lead teachers in NC Pre-K are required to have at least a bachelor's degree and either hold or be working toward early childhood licensure. This licensure can take the form of either a North Carolina Birth through Kindergarten Standard Professional II licensure or, for teachers with a K–6 license, a Preschool Add-on License. Teaching assistants must have a high school diploma or GED and have or be working toward either an associate's degree in early childhood education or child development or a Child Development Associate credential (North Carolina Division of Child Care and Early Education, 2018).

Other than NC Pre-K, most early childhood education programs in North Carolina have limited education requirements for teachers. However, there has been some steady progress in the number of early childhood teachers and directors who have degrees or training in early childhood education or child development. A Child Care Services Association 2015 workforce report — which covers all early childhood centers serving children from birth through preschool — indicates that 60% of early childhood center directors had a bachelor's degree in 2015, which is an increase of nine percentage points from 2011 (Child Care Services Association, 2015).

Although the education level of the early education workforce in North Carolina has improved over time, it is still far behind compared with the education and training levels of the teacher workforce in public schools. Similarly, even though efforts have been made through the T.E.A.C.H. Early Childhood® Scholarship Program and the Child Care WAGE\$® Program, even the most highly compensated early childhood teachers are paid much less than their kindergarten teacher counterparts. In fact, counties that did not apply for expansion NC Pre-K funds cited the scarcity of qualified teachers as a key reason for not applying. These factors continue to fuel a strong disincentive for potential high-quality teachers to enter, and stay in, the early childhood education field, and they make it difficult for the state to build a strong, educated, stable workforce in early childhood education.

Conclusions

Based on our review of multiple data sets and previous research findings, as well as input from a range of North Carolina education stakeholders, some key takeaways emerged:

- » Pre-K programs in North Carolina are high quality, but they are not accessible to enough eligible children.
- » The early childhood education teacher pipeline is insufficient for building a strong workforce.
- » More comprehensive data systems are needed to address the variation in access to early childhood education across and within counties.
- » There are funding barriers to expanding early childhood programs that can be addressed.

References

- Barnett, W. S. (2019). *Barriers to expansion of NC Pre-K: Problems and potential solutions*. New Brunswick, NJ: National Institute for Early Education Research.
- Barnett, W. S., & Masse, L. N. (2007). Comparative benefit-cost analysis of the Abecedarian program and its policy implications. *Economics of Education Review*, 26(1), 113–125.
- Belfield, C. R. (2019) *The effectiveness, efficiency, and economic value of early childhood education*. (Prepared for the Learning Policy Institute).
- Child Care Services Association. (2015). *Working in early care and education in North Carolina: 2015 workforce study*. Retrieved from <https://www.childcareservices.org/wp-content/uploads/2017/11/2015-Workforce-Report-FNL.pdf>
- Dodge, K. A., Bai, Y., Ladd, H. F., & Muschkin, C. G. (2017). Impact of North Carolina's early childhood programs and policies on educational outcomes in elementary school. *Child Development*, 88(3), 996–1014.
- Dodge, K. A., Bai, Y., Ladd, H. F., & Muschkin, C. G. (2019). *Evaluation of North Carolina early childhood among middle school students*. Unpublished paper, Duke University, Durham, North Carolina.
- Feeding America (2018). *Map the meal gap 2018: Overall food insecurity in North Carolina by county in 2016*. Retrieved from <http://map.feedingamerica.org/>
- Friedman-Krauss, A., Bernstein, S., & Barnett, W. S. (2019). *Early childhood education: Three pathways to better health* (Preschool Policy Brief). New Brunswick, NJ: National Institute for Early Education Research.
- Heckman, J., Pinto, R., and Savelyev, P. (2013). Understanding the mechanisms through which an influential early childhood program boosted adult outcomes. *American Economic Review*, 103(6), 2052–2086.
- Hoke County Board of Education v. State, 358 N.C. 605, 632, 637 (2004).
- Karoly, L. A. (2016). The economic returns to early childhood education. *Future of Children*, 26(2), 37–55.
- Ladd, H. F., Muschkin, C. G., & Dodge, K. A. (2014). From birth to school: Early childhood initiatives and third grade outcomes in North Carolina. *Journal of Policy Analysis and Management*, 33(1), 162–187.
- Meloy, B., Gardner, M., & Darling-Hammond, L. (2019). *Untangling the evidence on preschool effectiveness*. Palo Alto, CA: Learning Policy Institute.
- Muschkin, C. G., Ladd, H. F., & Dodge, K. A. (2015). Impact of North Carolina's early childhood initiatives on special education placements in third grade. *Educational Evaluation and Policy Analysis*, 37(4), 478–500.
- North Carolina Department of Commerce. (n.d.). *2018 North Carolina development tier designations*. Retrieved from https://files.nc.gov/nccommerce/documents/files/2018-Development-Tier-Rankings_0.pdf
- North Carolina Department of Health and Human Services. (2018). *Child care analysis summary*. Retrieved from https://ncchildcare.ncdhhs.gov/Portals/0/documents/pdf/S/statistical_detail_report_december_2018.pdf
- North Carolina Division of Child Care and Early Education. (2018). *North Carolina Pre-Kindergarten (NC Pre-K) program requirements and guidance, state fiscal year 2017–2018*. Retrieved from https://ncchildcare.ncdhhs.gov/Portals/0/documents/pdf/N/NCPre-K_Program_Requirements_Guidance.pdf
- Ponder, K. W. (2010). *Early childhood education and North Carolina's Smart Start initiative*. Raleigh, NC: North Carolina State University Institute for Emerging Issues.
- Reynolds, A. J., Richardson, B. A., Hayakawa, M., Lease, E. M., Warner-Richter, M., Englund, M. M., Ou, S., & Sullivan, M. (2014). Association of a full-day vs. part-day preschool intervention with school readiness, attendance, and parent involvement. *Journal of the American Medical Association*, 312(20), 2126–2134.
- U.S. Census Bureau. (2017). FactFinder. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/download_center.xhtml
- U.S. Department of Agriculture Economic Research Services. (n.d.). *Percent of total population in poverty, 2017*. Retrieved from <https://data.ers.usda.gov/reports.aspx?ID=17826>
- Wechsler, M., Kirp, D., Ali, T. T., Gardner, M., Maier, A., Melnick, H., & Shields, P. M. (2016). *The road to high-quality early learning: Lessons from the states*. Palo Alto, CA: Learning Policy Institute.

Appendix F. Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities¹

Introduction

More than 400,000 students — over a quarter of the students in North Carolina — attend the 843 high-poverty schools (HPSs) in the state, which represent roughly a third of schools statewide. HPSs are schools in which 75% or more of the students are eligible for federally subsidized free or reduced-cost school meals because of their families' low income,² making them “at risk,” as defined in *Leandro vs. the State of North Carolina (Leandro)*. These HPSs also serve disproportionate numbers of students with other risks identified by the *Leandro* case, including students who have parents with low education levels, who have limited proficiency in English, who are members of a racial or ethnic minority group, or who have families headed by a single parent (*Hoke County Board of Education v. State*, 2004).

HPSs, and the children they serve, deserve special attention as the state seeks to understand and remedy its failure to provide all students with a sound basic education. This study examined the within-school and out-of-school barriers to receiving a sound basic education for students who attend HPSs and also recommended actions to take to lower those barriers.

Approach

Learning Policy Institute (LPI) researchers conducted an evidence-based assessment of HPSs that focused on the challenges facing these schools in supporting positive outcomes for their students and in providing their students with access to the *Leandro* tenets. As one indicator of the differences in opportunity available to students attending more and less advantaged schools, the study compared the opportunities and results of students in HPSs with those of students in low-poverty schools (LPSs), which are schools with fewer than 25% low-income students. The study also considered the adverse out-of-school conditions that add risk to students in HPSs and whether HPSs provide the supports that the *Leandro* case and prior research indicate are necessary for providing all at-risk students with an opportunity for a sound basic education.

Based on a review of prior research, the researchers posed the following questions to guide the study:

» *How many HPSs are there? Who attends them? Where are they located?*

1 This study brief summarizes the following paper: Oakes, J., Cookson, P., Levin, S., Carver-Thomas, D., Frelow, F., Berry, B., Yang, M., George, J., Brooks, J. & Guin, S. (2019). *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities*. Palo Alto, CA: Learning Policy Institute.

2 The U.S. Department of Education's National Center for Educational Statistics has established this definition of high-poverty schools.

- » What are the social, racial, geographic, governance, and economic contexts in which HPSs operate?
- » Do HPSs limit students' opportunity for a sound basic education?
- » Do HPSs provide equal and adequate access to the *Leandro* tenets?
- » Do HPSs provide supports that help offset the risks associated with concentrated poverty?
- » In what ways do state policies support or constrain HPSs' provision of opportunities and supports?

To answer these questions, the LPI researchers drew on existing studies and conducted new analyses of state and federal data and data from a new survey of principals in North Carolina. The researchers also used data collected during on-site observations and interviews with teachers, administrators, and staff at HPSs and LPSs in North Carolina as well as parents of North Carolina HPS and LPS students.

Findings

North Carolina has large numbers of high-poverty schools and students attending those schools

North Carolina has 807 high-poverty district schools and 36 high-poverty charter schools; this represents one third of all the state's districts and slightly more than 20% of the state's charter schools. These schools are located in urban, rural, and suburban communities in every region in the state. Notably, 78 counties have district HPSs, and 21 counties have high-poverty charter schools. The percentage of HPSs within the state's 100 counties ranges from 0% to 100%. About one quarter (26%) of all North Carolina students attend HPSs — more than those attending LPSs (13%). In district schools, 2.6 times as many students attend HPSs as attend LPSs. In charter schools, 3.3 times as many attend HPSs as attend LPSs.

Students with other at-risk factors, as defined by *Leandro*, are also concentrated in HPSs. Students of color comprise 77% of students attending district HPSs and 93% of those attending charter HPSs — far greater percentages than their 52% representation statewide. White students — 49% of the student population statewide — comprise only 23% of students in district HPSs and 7% in charter HPSs. The communities in which HPSs and LPSs are located display racial patterns, with nearly all LPSs in majority-White communities and with HPSs in majority-minority communities at twice the rate one would expect given residential patterns.

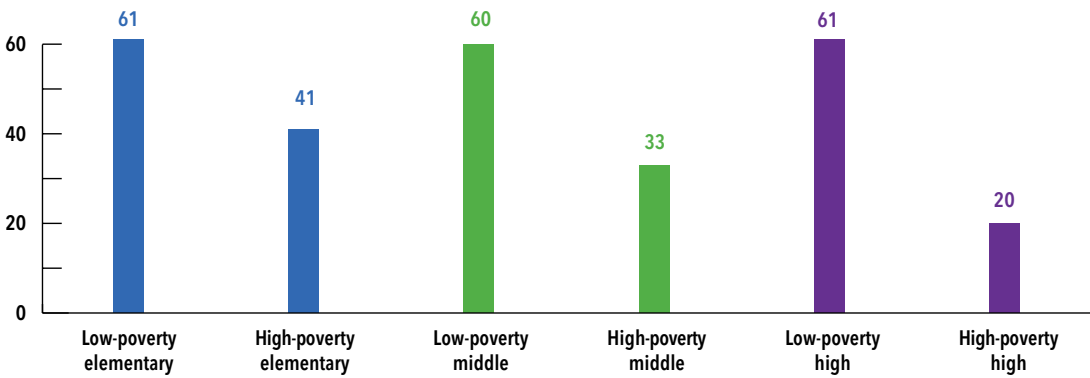
Two other at-risk groups of students disproportionately attend HPSs: those with limited proficiency in English and those with disabilities. HPSs enroll 45% of the state's English learner students and 28% of the state's students with disabilities.

Students in high-poverty schools are far less likely to receive a sound basic education

The *Leandro* ruling clearly defines the outcomes that must be produced for a sound basic education — students must achieve specific competencies and demonstrate proficiency on state tests. Across North Carolina, economically disadvantaged students are less likely than their more-advantaged peers to meet this bar.

Students attending HPSs struggle more than those not attending HPSs, in part because of the negative effects of living in an area of concentrated poverty, which has more of an impact than just individual students’ socio-economic status. As displayed in Exhibit F1 below, economically disadvantaged students who attend schools with more economically advantaged peers have better academic achievement outcomes than economically disadvantaged children who attend schools where most students are poor, with the negative association of concentrated poverty growing larger from elementary to high school.

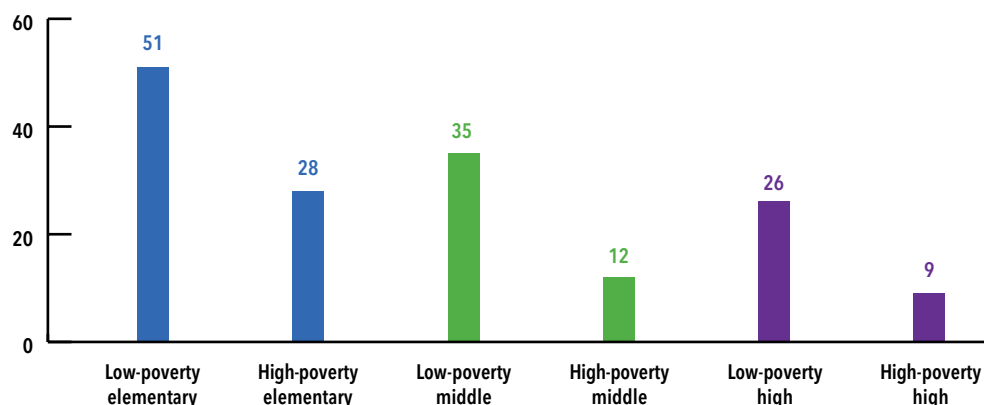
Exhibit F1. Percentage of economically disadvantaged students deemed grade-level proficient, 2017



Source: North Carolina Department of Public Instruction (2018)

We find a similar pattern for English learner students (Exhibit F2).

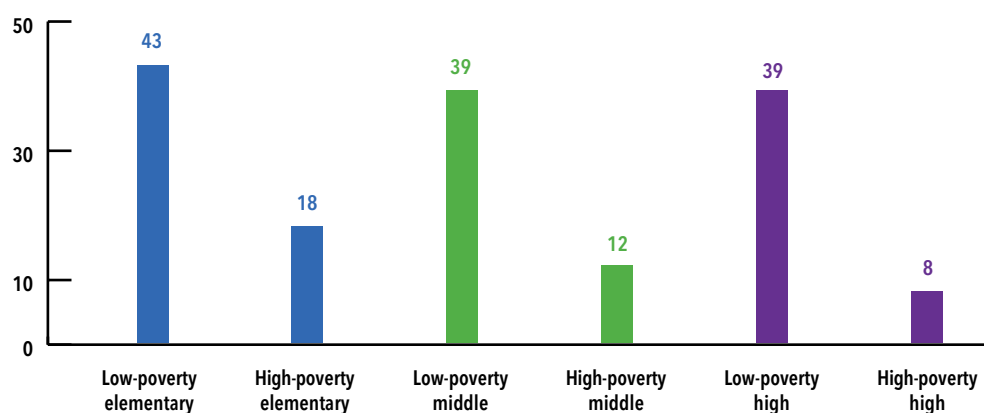
Exhibit F2. Percentage of English language learners deemed grade-level proficient, 2017



Source: North Carolina Department of Public Instruction (2018)

And the same pattern holds for students with disabilities (Exhibit F3).

Exhibit F3. Percentage of students with disabilities deemed grade-level proficient, 2017



Source: North Carolina Department of Public Instruction (2018)

These data provide evidence of a strong negative relationship for at-risk students attending an HPS and their attainment of a sound basic education as specified in *Leandro*.

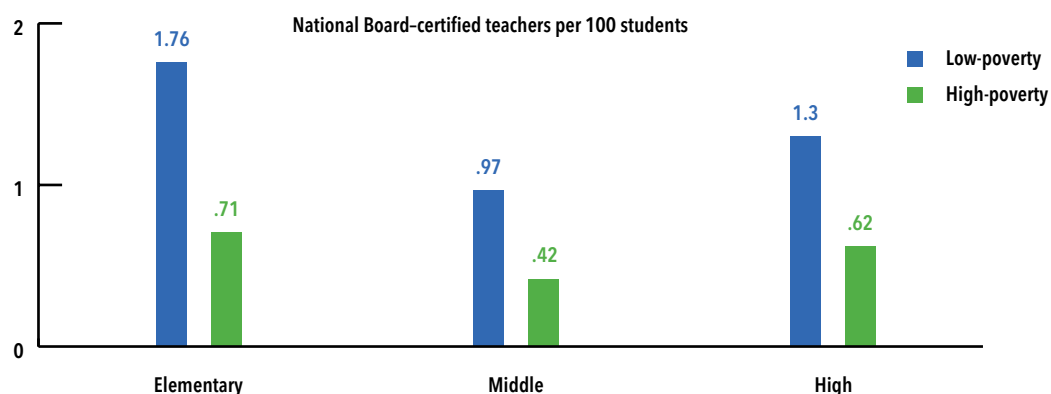
Equal opportunity for a sound basic education is compromised in high-poverty schools because they provide less access to the *Leandro* tenets

Leandro calls for access to competent teachers and leaders and adequate resources to ensure a sound basic education. Extensive research, including this study's new analyses (Darling-Hammond & Carver, 2017), clearly substantiate the findings of the Supreme Court of North Carolina (the Court) that access to an adequate supply of well-qualified and experienced teachers is associated with higher student performance (Harris & Sass, 2011; Ladd

& Sorensen, 2015; Papay & Kraft, 2015). This study's analysis also reveals the importance of school leadership in improving teacher retention and school performance, a finding that is consistent with a growing number of studies, including a 2010 study of how principals matter in creating positive working conditions (Burkhauser, 2016). Similarly, prior research and this study's analyses indicate that the adequacy of school resources and learning conditions are also related to student performance (Levin, 2007; Oakes, 1990).

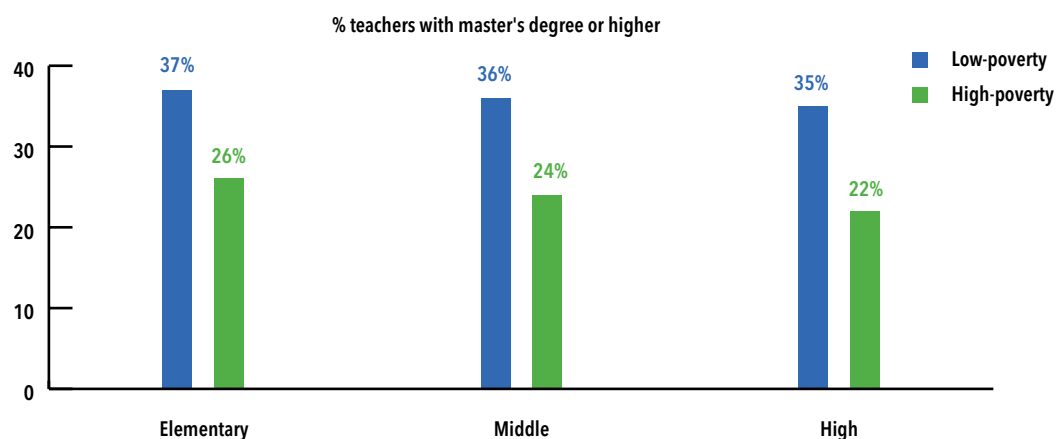
Regarding the *Leandro* Teacher Tenet, as the exhibits below show, North Carolina's HPSs have fewer teachers who are fully licensed, who have advanced degrees, and who have achieved National Board of Professional Teaching Standards Certification. The HPSs also have more lateral-entry teachers and more early-career teachers (teachers without certification or with fewer than three years of experience), who have been shown, on average, to be less effective in improving student achievement than teachers with more preparation and experience (Henry et al., 2013; Ingersoll, 2001).

Exhibit F4. Fewer National Board–certified teachers in high-poverty schools, 2017



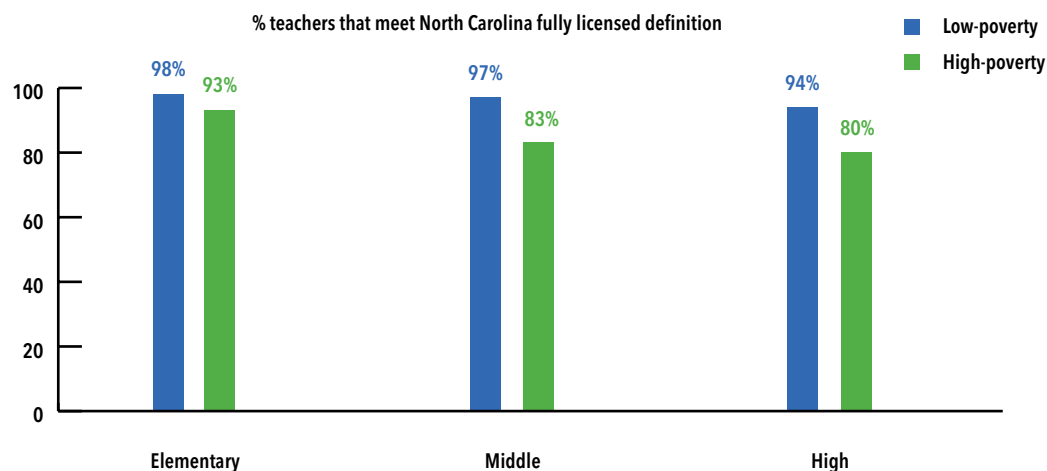
Source: LPI analysis of North Carolina Department of Public Instruction data

Exhibit F5. Fewer teachers with advanced degrees in high-poverty schools, 2017



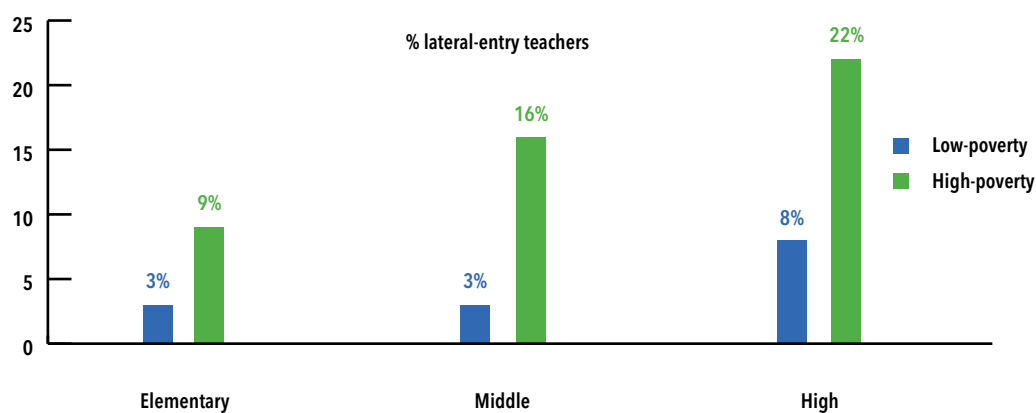
Source: LPI analysis of North Carolina Department of Public Instruction data

Exhibit F6. Fewer fully licensed teachers in high-poverty schools, 2017



Source: LPI analysis of North Carolina Department of Public Instruction data

Exhibit F7. More lateral-entry teachers in high-poverty schools, 2017



Source: LPI analysis of North Carolina Department of Public Instruction data

In addition, HPSs have nearly double the one-year teacher turnover rates of LPSs.

Regarding the *Leandro* Leader Tenet, HPSs have significantly less experienced school leaders, as measured by principals' responses to a statewide survey.

Exhibit F8. Experience levels of principals at high- and low-poverty schools

	LPS	HPS
How many years have you been principal of this school?		
0–3	42%	64%
4–10	50%	30%
11+	8%	5%
Do you plan to continue to serve as principal at this school for at least three more years?		
No	6%	14%
Yes	82%	53%
Don't know	12%	33%

Source: Survey administered by WestEd to all principals statewide, 2018

Other survey responses by principals in HPSs show that they felt less prepared to perform the key elements of their jobs and less satisfied with the support they receive from their districts compared with principals in other schools. More than a quarter (26%) reported that if they could get a higher-paying job, they would leave education as soon as possible.

The third *Leandro* tenet requires that adequate resources be provided to meet all students' educational needs. These include suitable facilities and sufficient instructional materials, challenging curriculum and instructional practices, school conditions that prioritize teaching and learning, a positive school climate, positive relationships with families and community, and sufficient funding to support all of these. In each of these domains, this study found discrepancies between LPSs and HPSs that advantage students in LPSs. For example, a strong predictor of students' success is challenging curriculum and instruction, including access to programs for gifted students. About 12% of students statewide are offered access to gifted programs, but they are concentrated disproportionately in LPSs. Approximately 1.5 times the number of such students are in LPSs rather than in HPSs. Students in LPSs are provided access to gifted programs at nearly 10 times the rate of students in HPSs — suggesting that HPSs may not be discovering or nurturing the talents of many students attending such schools.

Exhibit F9. Access to services for academically or intellectually gifted students, 2017

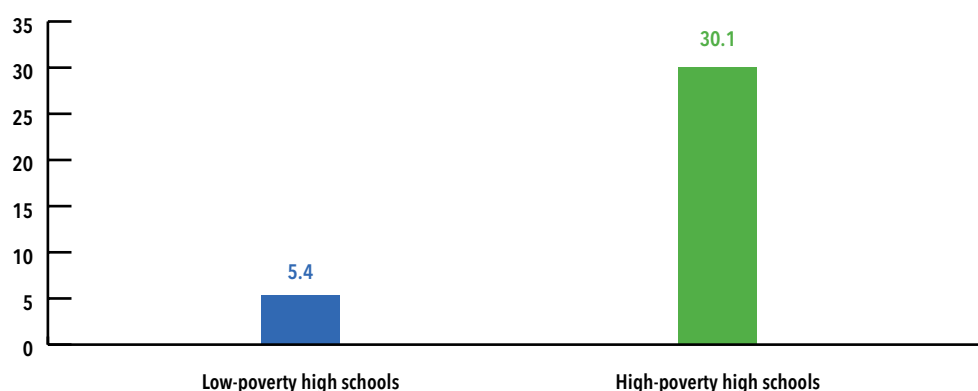
Type of school	Number and percentage of students identified and served by academically or intellectually gifted programs
All schools	178,270 (12% of all students)
High-poverty schools	19,813 (5% of students attending HPSs)
Low-poverty schools	34,170 (23% of students attending LPSs)

Source: North Carolina Department of Public Instruction (2018)

Similar disparities exist in high school students' access to and participation in coursework most likely to support them to be ready for college, such as honors, Advanced Placement, and International Baccalaureate programs. Low-poverty high schools enroll more than a third (35%) of their students in these classes, four times the percentage (8%) that high-poverty high schools enroll.

This study's analyses also revealed significant disparities in school conditions that prioritize teaching and learning. For example, using school suspensions as a response to student misbehavior is known to reduce levels of student achievement because when students are not in school, they are not learning (Balfanz, Brynes, & Fox, 2015). Yet, as shown in Exhibit F10, HPSs use suspensions at six times the rate of LPSs (controlling for differences in student misbehavior), thereby undermining instructional time and student engagement.

Exhibit F10. Number of short-term suspensions in relationship to number of reported incidents of misbehavior per 100 students, 2017



Source: LPI analysis of North Carolina Department of Public Instruction data

These and many other disparities between LPSs and HPSs in access to the tenets, such as well-prepared and experienced educators, safe and positive school climates, and other school conditions supportive of teaching and learning, combined with the evidence about the relationship between the tenets and student performance, help explain why HPSs have far lower student academic outcomes than LPSs in North Carolina.

Students' equal opportunity for a sound basic education is limited in high-poverty schools by a lack of supports and services to help mitigate barriers to learning associated with adverse out-of-school conditions in communities of concentrated poverty

At-risk children living in communities of concentrated poverty and attending HPSs experience adverse out-of-school conditions that place them at further risk and undermine their opportunity to obtain a sound basic education. These out-of-school conditions include poverty-level family incomes, family unemployment and underemployment, food insecurity and hunger, limited or no access to health care, high rates of childhood trauma, and unstable and unpredictable housing.³

³ These conditions were identified in interviews and focus groups. See also Galster, 2010. A separate paper in this series focused on issues of food insecurity; see *Addressing Leandro: Supporting Student Learning by Mitigating Student Hunger* (Bowden & Davis, 2019). North Carolina State University.

Our analyses of data from the U.S. Census Bureau’s American Community Survey in years 2012–2016 documented the relative presence of these conditions in the census tracts where HPSs and LPSs are located. For example, on average, HPSs are in communities where 64% of children under 18 live in families with incomes below 200% of the federal poverty level.⁴ In contrast, LPSs are in communities with an average of 19% of children at this low-income level.

The *Leandro* ruling notes that at-risk students need more and different resources and interventions as compared with their more-advantaged peers. Effective strategies to address the need of at-risk students include high-quality pre-kindergarten programs, whole-child approaches to K–12 schooling, wraparound services, school support personnel available at ratios that meet national standards, and additional learning time and opportunities beyond the regular school day. These supports help counter the harms of the cumulative disadvantages associated with poverty.

Although some North Carolina HPSs and communities intervene and provide some of these supports, most are unable to provide the types and amounts of support needed by students because of limited resources and capacity. Moreover, the supports and interventions that do exist are not fully backed by and integrated into the public education system. Nearly all are voluntary, funded by philanthropy and charities, or dependent upon an informal “partnership” rather than being part of a guaranteed public infrastructure with resources to support sustainability.

In addition, although the state has endorsed a whole-community, whole-school, and whole-child approach to providing additional supports and services to students and families in HPSs, the program has been implemented in only 11 counties on a pilot basis. A lack of resources and staff capacity in the North Carolina Department of Public Instruction for this program and the inadequate number of school support professionals in HPSs suggest a lack of commitment to such evidence-based interventions to help mitigate the out-of-school barriers to student learning in HPSs.

Systemic barriers limit access to a sound basic education in high-poverty schools

State policies that govern schools’ financial resources, the teacher pipeline, supports for children and families, and school accountability could help address some of the out-of-school challenges described above, but many current state policies do not. Adopting competitive compensation and retention strategies, such as state-provided salary supplements to teachers in high-poverty schools in low-wealth communities, and adding concentration-of-poverty weights to the current state allotment system are examples of policies for addressing systemic problems.

First, and perhaps most significant, both the amount and the distribution of additional state allotments for students with additional needs provide insufficient support for districts and schools where poverty is concentrated. For example, additional funding for at-risk students does not target schools or communities where poverty is concentrated, and the evaluation conducted by the North Carolina General Assembly found that funding for at-risk and disadvantaged students is not distributed equitably. In addition, the steady decline in funding for all

4 Below 200% of poverty level is commonly used as the threshold of family income to identify children living in poverty. See, for example, Kid’s Count at <https://datacenter.kidscount.org/data/tables/47-children-below-200-percent-poverty?loc=35&loc=2#detailed/2/35/false/871,870,573,869,36,868,867,133,38,35/any/329,330>

schools over the last decade has compromised the ability of HPSs to provide the supports necessary for a sound basic education for at-risk students, particularly in low-wealth districts. The state's resource allocation structure, particularly its allotment of teaching positions and some categorical programs, results in too few and inflexible resources for HPSs — problems compounded by recent funding declines. The negative impact of low funding levels from the state is exacerbated by the inability of low-wealth districts to raise additional funds locally because of their lower tax base, something that counties with more robust economies and higher tax bases routinely do.

Second, policies related to the educator pipeline — policies that address preparation, recruitment, compensation, evaluation, and retention of the educator workforce — limit the ability of HPSs to attract and keep highly qualified teachers, which, in turn, affects the quality of instruction. Few certified and experienced teachers are attracted to teach or to stay in HPSs, especially in rural HPSs. Similar barriers exist, especially in rural and low-wealth areas, with respect to attracting and keeping effective principals and superintendents.⁵

Third, the state's accountability system has undermined the quality of education in HPSs. More than a decade ago, studies of North Carolina's education system found that the disproportionate impact on HPSs of the state's accountability strategy of sanctioning schools based entirely on test performance made it even more difficult for these schools to attract and retain qualified teachers (Clotfelter, Ladd, Vigdor, & Aliaga-Diaz, 2004). The associated hiring of untrained teachers, through the state's lateral-entry route, had strong negative effects on quality (Clotfelter, Ladd, & Vigdor, 2007).

Fourth, the state has not provided at-risk students with sufficient access to high-quality pre-kindergarten programs. State funding covers only about 60% of the cost of a pre-kindergarten slot. Each county must contribute the remaining 40% through county, local, philanthropic, or other funding sources. Low-wealth communities are usually not able to meet this funding match. Other state policies have contributed to an early education workforce that lacks adequate training, credentials, compensation, and benefits. The median annual base salary for early childhood teachers in North Carolina is \$22,800 and usually does not include benefits. As a result, 40% of these teachers are eligible for public assistance, including the Supplemental Nutrition Assistance Program. This leads to high turnover and a lack of stability in the staffing of the programs.

Finally, policies related to charter schools and opportunity scholarships contribute to the effects of cumulative disadvantage in HPSs because these policies attract more-advantaged students and fewer students with disabilities to charter schools than those left behind (North Carolina Department of Public Instruction, 2018). Students enrolling in charters take with them the average cost per student in the district where the charter is located, but the loss of a student to a charter does not diminish districts' and schools' fixed costs, such as costs related to buildings and transportation. In effect, charter schools can reduce the amount of funds available to HPSs through a loss of per-pupil allocations and district expenses for their operations.

Conclusions

This study's findings show how the conditions and contexts of HPSs, as well as state policies, contribute to unequal and insufficient opportunities for a sound basic education for at-risk students who attend HPSs. The findings indicate

5 From 2018 interviews and focus groups with officials of the North Carolina Department of Public Instruction.

that students in HPSs experience a cumulative disadvantage that constrains their opportunities to learn and that outcomes set forth in the *Leandro* rulings are not being met. The findings also show that the barriers students face in HPSs are not incidental or random — they are structural and reinforced by state policies. Fortunately, modifying current policies and developing others to ensure equitable access to the *Leandro* tenets and help mitigate the effects of poverty on learning and child well-being is not only possible, but also within reach in North Carolina.

In particular, the state could expand its high-quality early childhood system to make publicly funded, voluntary, high-quality programs universally accessible for 3- and 4-year-olds in high-poverty communities. It could develop policies that attract, prepare, and retain a highly qualified, diverse, and stable K–12 teacher and leader workforce in HPSs. It could build capacity and provide additional time, such as a longer school day, and resources in HPSs to support effective instructional programs. The state could also use a community-schools or other evidence-based approach to address the out-of-school barriers to learning that constrain HPSs’ ability to meet the educational needs of all students, including at-risk students, and provide them with an equal opportunity for a sound basic education (Maier, Daniel, Oakes, & Lam, 2017).

References

- Balfanz, R., Brynes, V., & Fox, J. (2015). Sent home and put off track: The antecedents, disproportionalities, and consequences of being suspended in the 9th grade. *Journal of Applied Research on Children*, 5(2), 1–19.
- Bowden, A. B. & Davis, R. (2019). *Addressing Leandro: Supporting student learning by mitigating student hunger*. Raleigh, NC: North Carolina State University.
- Burkhauser, S. (2016). How much do school principals matter when it comes to teacher working conditions? *Educational Evaluation and Policy Analysis*, 39(1), 1–20.
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). *How and why do teacher credentials matter for student achievement?* (NBER Working Paper 12828). Cambridge, MA: National Bureau of Economic Research. (From 8-12-18 NC Educator draft)
- Clotfelter, C. T., Ladd, H. F., Vigdor, J. L., & Aliaga-Diaz, R. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Policy Analysis and Management* 23(2), 251–271.
- Darling-Hammond, L., & Carver, D. (2017). *Teacher turnover: Why it matters and what we can do about it*. Palo Alto, CA: Learning Policy Institute.
- Galster, G. C. (2010, February). *The mechanism(s) of neighborhood effects: Theory, evidence, and policy implications*. Presentation at the ESRC Seminar, St. Andrews University, Fife, Scotland, UK.
- Harris, D., & Sass, T. (2011). *Teacher training, teacher quality, and student achievement* (CALDER Working Paper No. 3). Washington, DC: American Institutes for Research.
- Henry, G. T., Purtel, K. M., Bastian, K. C., Fortner, K. C., Thompson, C. L., Campbell, S. L., & Patterson, K. M. (2013). The effects of teacher entry portals on student achievement. *Journal of Teacher Education*, 65(1), 7–23.
- Hoke County Board of Education v. State, 358 N.C. 605, 632, 637 (2004).
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534.
- Ladd, H., & Sorensen, L. (2015). *Returns to teacher experience: Student achievement and motivation in middle school* (CALDER Working Paper No. 112). Washington, DC: American Institutes for Research.
- Levin, H. M. (2007). On the relationship between poverty and curriculum. *North Carolina Law Review*, 85(5), 1381–1418.
- Maier, A., Daniel, J., Oakes, J., & Lam, L. (2017). *Community schools as an effective school improvement strategy: A review of the evidence*. Palo Alto, CA: Learning Policy Institute.
- North Carolina Department of Public Instruction (2018, February). *Report to the North Carolina General Assembly: Charter schools annual report* (S.L. 2013-335; S.L. 2014-115).
- Oakes, J. (1990). *Multiplying inequalities: The effects of race, social class, and tracking on opportunities to learn mathematics and science*. Santa Monica, CA: RAND Corporation.
- Oakes, J., Cookson, P., Levin, S., Carver-Thomas, D., Frelow, F., Berry, B., Yang, M., George, J., Brooks, J., & Guin, S. (2019). *Providing an Equal Opportunity for a Sound Basic Education in North Carolina's High-Poverty Schools: Assessing Needs and Opportunities*. Palo Alto, CA: Learning Policy Institute.
- Papay, J. P., & Kraft, M. A. (2015). Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career improvement. *Journal of Public Economics*, 130, 105–119.

Appendix G. North Carolina's Statewide Assessment System: How Does the Statewide Assessment System Support Progress Toward Meeting the *Leandro* Requirements?¹

Overview

A high-quality assessment system that provides useful and timely data on student growth and proficiency is an integral component for ensuring a sound basic education for all students. Results from high-quality assessments, coupled with a thoughtfully designed accountability system, can provide valuable information about students' academic progress and inform stakeholders when policies and practices are not working as intended. A high-quality assessment system needs to serve multiple purposes reflecting the needs of multiple stakeholder groups, providing crucial information to support progress toward a sound basic education across all levels of the broader education system.

Complex and Diverse Needs of Stakeholders

A high-quality assessment system must work in concert with curriculum and instruction to serve multiple purposes for different stakeholders, including students, families, teachers, district and school leaders, state department staff, and policymakers (Jobs for the Future, 2018).

- » **Students:** The assessment system should support school environments in which students take personal responsibility for their academic, social, and emotional growth. To do this, students need to understand the long- and short-term expectations of their education system and develop strategies and habits of mind necessary to reach and exceed the expectations.
- » **Families:** Parents and caregivers want to know whether their child is thriving academically, socially, and emotionally. They want their child's teachers and school staff to understand the child's strengths and weaknesses and to rely on objective evidence to ensure that the child is on track for success in school and in life.
- » **Teachers:** Teachers need access to classroom and interim/benchmark assessments to check for student understanding, differentiate appropriately, diagnose learning challenges, monitor progress, and facilitate learning. In addition, they need ongoing access to training, coaching, and resources to support real-time teaching and learning strategies.
- » **District and school leaders:** District and school leaders rely on standardized interim/benchmark and summative measures to direct resources toward specific subgroups of students and students who may be falling behind. They need access to multiple sources of data to evaluate curriculum and instruction,

¹ This study brief summarizes the following paper: *North Carolina's Statewide Assessment System: How Does the statewide Assessment System Support Progress Toward Meeting the Leandro Tenets?* (Brunetti, Hemberg, Brandt, & McNeilly, 2019).

facilitate teachers' and students' growth, monitor performance, identify achievement gaps, and inform school and district improvement plans.

- » **State department staff:** State departments must be able to collect, analyze, and report assessment data quickly and transparently to multiple stakeholder groups in different ways and for different purposes. They also need access to integrated data systems so that assessment data can be used in combination with other data sources to direct resources and support, evaluate policies and programs, and drive continuous improvement.
- » **Policymakers:** Policymakers and their research staff need access to longitudinal data to track district and school health. A centralized data repository that includes common elements to link individual student assessment data to student information systems and cross-agency data can be helpful for conducting research to address pressing policy questions, such as the cost/benefit of new initiatives and the effectiveness of school programs and pilots.

Types of Assessment

A high-quality assessment system includes different types of assessments and processes, each used for different purposes at different levels of the system — that is, state, district, school, and classroom (Sigman & Manusco, 2017). Four broad categories of assessment support education decision-making for various stakeholders: formative, diagnostic, interim/benchmark, and summative:

- » **Formative:** Formative assessment is a planned, ongoing process used by all students and teachers during learning and teaching to elicit and use evidence of student learning to improve student understanding of intended disciplinary learning outcomes and support students to become self-directed learners (Council of Chief State School Officers, 2019). Its main purpose is to inform real-time teaching and learning, using evidence and feedback to move learning forward by adjusting learning strategies, goals, and next instructional steps.
- » **Diagnostic:** Although many assessments may be considered diagnostic, traditionally and formally, diagnostic tests are generally used when students are demonstrating difficulties in learning, and results may assist in diagnosing strengths and needs. Because of the diagnostic nature of these assessments, they are often administered by specially trained education personnel.
- » **Interim/benchmark:** Interim, or benchmark, assessments are generally administered by teachers at key points in time for one or both of two purposes: (1) to evaluate what students have learned in relation to mid-term goals and (2) to predict students' performance on specific standards assessed by the state's end-of-year summative assessment. For leaders, results indicate whether students are on track in meeting learning goals and can inform decisions about, for example, curricular adjustments and professional learning needs.
- » **Summative:** Summative assessments provide information about students' achievement of academic content standards following a longer period of instruction, such as a full semester or school year (e.g., final exams, end-of-year assessments). Results from summative measures can be used for grading and reporting purposes, policy and program decisions, and decisions about resource allocation and professional learning priorities.

Essential Characteristics of a High-Quality Assessment System

Adopting a set of high-quality assessments alone, without understanding how they fit within a larger system that addresses a specific set of goals and purposes, creates inefficiencies that impede the needs of all stakeholder groups. For example, a district may identify and adopt a high-quality set of interim/benchmark assessments that, on their own, achieve their intended purpose of helping the district's educators better understand whether their students are on track in their learning progress. However, if these interim/benchmark assessments do not align with the existing statewide assessment system, they may create incoherence or imbalance, which can negatively impact student achievement. To prevent overassessment, the system must be planned carefully, which will likely entail making difficult decisions about which assessments to keep and which to do away with; ensuring that staff work within the system; and training staff to understand the purposes of individual assessments, what they are designed to do, and how they complement and support other assessment practices within the system.

To meet a diverse set of needs and purposes, an assessment system must be carefully planned, implemented, and monitored. Ongoing input and open communication across state and local education agencies (LEAs) and stakeholders, especially students and teachers, are necessary. Stakeholders and representatives within those state and LEAs are expected to bring their own unique experiences and perspectives about which assessments work best to address a given purpose. When implemented well, results generated from a high-quality assessment system will improve stakeholder decisions. Better decisions produce opportunities for deeper and more meaningful instruction, leading to holistic improvements in students' development and achievement.

A high-quality assessment system must work in concert with curriculum and instruction to serve multiple purposes for different stakeholders — including students, families, teachers, district and school leaders, state department staff, and policymakers. High-quality assessment systems are coherent, comprehensive, balanced, efficient, aligned, and flexible. These characteristics are not mutually exclusive; they are inextricably linked and provide a holistic approach to assessment.

- » **Coherence** occurs when a system's component parts work together in logical and consistent ways to produce a clear and efficient whole. Coherence is achieved when decisions about curriculum, instruction, and assessment occur in conjunction with each other. In other words, decisions about curriculum and instruction should be informed by and align with the outcomes that students should produce and that assessments will measure.
- » **Comprehensive assessment systems** incorporate the full range of measurement approaches to address various purposes (National Research Council, 2001). Because assessments have different purposes and stakeholders have different needs, a wide range of assessments must be available to meet the needs of diverse stakeholders.
- » **Balanced assessment systems** ensure that both assessments and the information produced from them are available and ready for use by the right people (who), in the right proportion (how often), at the right time (when), and for the right purpose (why). A balanced assessment system shifts emphasis from "assessment of learning" to "assessment for learning" (i.e., more emphasis on formative assessment and less emphasis on summative and interim/benchmark assessment) (Heritage, 2017; Jobs for the Future, 2018; Stiggins, 2017).

- » **Efficiency** is achieved when stakeholders have access to the full array of assessment tools and training to achieve their objectives *and* when redundant, unused, and untimely assessments are eliminated from the system (Chattergoon & Marion, 2016; Conley & Darling-Hammond, 2013).
- » **Aligned assessment systems** support the use of assessment within the classroom, across levels of the system, and across the grade-level continuum so that what is taught and measured leads to college- and career-ready citizens (Sigman & Manusco, 2017). An aligned system reinforces the connection between curriculum, instruction, and assessment, thereby enhancing the learning process and improving outcomes for all students.
- » **Flexibility** allows for innovation and promotes improved balance in state and local assessment systems. The Every Student Succeeds Act (ESSA) includes a new Innovative Assessment Demonstration Authority (IADA) that enables states to operate innovative assessment systems, providing the flexibility to evaluate new assessment practices.

For any assessment system to work properly, each individual assessment within the system must meet specific criteria for serving its intended purpose(s), and the quality of each individual assessment must be examined to ensure the assessment produces valid, reliable, meaningful, and necessary information. In 2015, the U.S. Department of Education released the Testing Action Plan, which outlined a set of principles to inform the selection of individual assessments to address specific needs and purposes. According to the Testing Action Plan, assessments should be worth taking; high quality; time-limited; fair — and supportive of fairness — in equity in educational opportunity; fully transparent to students and parents; just one of multiple measures; and tied to improved learning (U.S. Department of Education, 2015). These principles can be used to evaluate, compare, and keep and/or discard existing assessments, thereby creating a more coherent, comprehensive, balanced, efficient, and aligned assessment system.

Approach

Researchers conducted interviews with several state-level stakeholders, including staff from the North Carolina Department of Public Instruction (NCDPI), and with county-level administrators who oversee assessment and accountability for their districts. A total of 13 interviews were conducted, 6 with state-level stakeholders and 7 with administrators from county offices of education representing a range of district characteristics. The researchers also reviewed key court documents and numerous documents from the NCDPI website and surveyed principals from across North Carolina.

The research team's goal was to collect information regarding the usefulness of assessments in North Carolina and to elicit ideas for how the state may better support the implementation of a high-quality assessment system. The evaluation focused on the following research questions:

- » How are statewide assessment results used by districts and schools to inform student and school improvement and to close gaps in educational opportunity and achievement?
- » What technical assistance, training, resources, and support does the NCDPI provide to help districts and schools interpret and use statewide assessment results for student and school improvement?

- » What gaps, if any, exist in the statewide assessment system? How do districts address or compensate for the gaps in the statewide assessment system?

Note that these research questions also supported the findings in the separate companion paper describing the accountability system, entitled *North Carolina's Statewide Accountability System: How to Effectively Measure Progress Toward Meeting the Leandro Tenets* (Learning Policy Institute, 2019).

Findings

Curriculum and Instructional Materials

The NCDPI states on its website that classroom instruction is a partnership between the state and local educators. The state sets the standards through the North Carolina Standard Course of Study (NSCOS), and LEAs determine which curriculum and instructional materials to use. This approach is typical, as most states do not develop or require specific curricula for statewide use. There are no detailed resources from the state that describe vetted or endorsed curricula that align to the NCSCOS. Although the researchers did not fully evaluate the breadth and depth of the curricula used across the state, county central office staff that were interviewed suggested that the support and resources available to educators are variable across districts (e.g., larger districts with more resources tend to develop their own curriculum guides, resources, and training to support instruction, whereas smaller districts must rely on limited instructional resources).

Although there are no curricular materials vetted or endorsed by the state, the NCDPI provides instructional support materials through its website. Specifically, these materials unpack academic standards and crosswalk documents, graphic organizers, glossaries of key terms, vertical progressions, and specifications that describe which standards are assessed on each NC Check-In (see the Flexibility section of this brief).

Coherence and Alignment Between Curriculum, Instruction, and Assessment

Improving education outcomes for all students requires an extensive effort to strengthen the coherence and alignment between curriculum, instruction, and assessment. North Carolina's theory of action, as stated in its ESSA plan, is focused on creating an adaptive and personalized learning environment for every student. Although that theory of action is commendable, there is little evidence within the remainder of the ESSA plan, or elsewhere, that indicates that the statewide assessment system is aligned to that theory of action. As the state transitions toward increased personalization of education, ensuring coherence and alignment of curriculum, instruction, and assessment will be critical to the success of its vision.

Comprehensiveness

ESSA requires that states annually assess students in reading/language arts and mathematics in grades 3–8 and once in high school, as well as administer one science assessment per grade span (i.e., once in grades 3–5, once in grades 6–8, and once in high school). In addition, English language proficiency assessments are required for

all English learners in K–12. ESSA also stipulates that all students should be tested, that appropriate accommodations should be provided to students when needed, and that the use of alternate assessments aligned to alternate academic achievement standards should be limited to 1% of all tested students in the state.

The assessment directors from the seven county offices of education that were interviewed suggested that the state summative assessment data lack the kind of detail and specificity (i.e., information on how well students performed in relation to specific academic standards) that would enable educators to modify instruction for individual students. However, state summative assessments are not designed to provide detailed data at the standard level because they are administered at the end of the year and are designed to assess the breadth of the standards. Further, the state summative assessments include a limited number of items (due to constraints on administration time), which minimizes the amount of detail that can be reported reliably. Reporting state summative assessment results at the standard level would require longer assessments (i.e., more assessment items), which would increase testing time and be less efficient to administer. Summative assessments are intended to be high-level snapshots of student progress and proficiency, whereas interim/benchmark assessments provide more detailed information on students' progress toward specific learning goals and standards.

Results from a statewide principal survey suggest a different take on the usefulness of state summative assessment data. Principals indicated that the data are useful for improving schools, planning professional development, and understanding student strengths and weaknesses. Principals also reported that state assessment data were easy to access and easy to understand, but that the timeliness of data from the state assessments could be improved.

The statewide assessments provided by the NCDPI are comprehensive and comply with federal requirements. The NCDPI provides summative and interim/benchmark assessments that can be used to measure student progress and proficiency and inform decisions about policies and programs. LEAs and educators provide additional interim/benchmark assessments, diagnostic assessments (when needed), and formative assessment. This approach to establishing a comprehensive system is typical; however, it is important to monitor the use of assessments across the state to ensure balance and efficiency between state-required assessments and the additional assessments chosen and administered by LEAs and educators.

Balance and Efficiency

In addition to the state-required and state-provided assessments, many LEAs in North Carolina require the administration of other assessments. The availability of commercially developed assessments is expansive. Commercial assessments are typically marketed to districts as interim/benchmark, classroom, or formative assessments and as being aligned to the state standards. Therefore, it is not surprising that many LEAs in North Carolina supplement the state-provided assessments with commercial assessments or locally developed assessments.

A concerted effort is being made by state leaders and policymakers to better understand the use of assessments at the local level. In December 2018, the North Carolina State Board of Education and the NCDPI provided their first report to the North Carolina General Assembly, per G.S. §115C-174.12 (d), describing the status of locally required assessments in North Carolina districts. This report, when used in conjunction with the *Interactive Local Testing Report*, is intended to provide greater transparency on the use of locally required assessments across the state.

Flexibility

The NCDPI, the State Board of Education, and the General Assembly are involved in ongoing efforts to improve the assessment system in North Carolina. Beginning in 2014 with the appointment of the Task Force on Summative Assessment, policymakers became keenly aware of the importance of balanced and efficient use of assessments in North Carolina (Guindon, Huffman, Socol, & Takahashi-Rial, 2014). The task force introduced the through-grade assessment model, which resulted in a proof-of-concept study and the development of the NC Check-Ins, which are optional interim/benchmark assessments developed by the state that are freely available to all LEAs across North Carolina.

The task force, the proof-of-concept study, and the development of the NC Check-Ins paved the way for the state's IADA application. On December 14, 2018, the NCDPI applied to the U.S. Department of Education's IADA to explore an alternative assessment model, called a through-grade assessment model, as a possible replacement for its end-of-grade (EOG) assessments. Through-grade assessment models utilize multiple interim/benchmark assessments throughout the school year in lieu of a single summative assessment at the end of the year. In its application, the NCDPI proposed the development of the North Carolina Personalized Assessment Tool, which would consist of three or four assessments that would be administered throughout the school year, replacing the EOG assessment for each grade at the end of the school year. The overarching goal of this model is to provide teachers, students, and families with immediate and actionable data for guiding instruction during the school year. At the time that this report was written, North Carolina's IADA application was pending approval from the U.S. Department of Education.

Quality

College- and career-readiness standards and expectations, like those defined in the NCSCOS, require students to demonstrate complex reasoning and problem-solving skills and to communicate effectively. To adequately assess the knowledge and skills defined in the NCSCOS, it is important for assessments to include opportunities for students to demonstrate their abilities to reason, solve complex problems, and communicate effectively.

An independent alignment study concluded that the state assessments are generally well aligned to the North Carolina academic standards (Smithson, 2015). However, assessment specifications reveal that the state summative assessments rely heavily on multiple-choice items. Heavy reliance on multiple-choice items lessens the cognitive demand of the assessment and de-emphasizes complex reasoning and communication skills, which are key attributes of college- and career-readiness standards. Further, assessments that rely heavily on multiple-choice items tend to influence teachers' instructional decisions, often resulting in a focus on lower-level cognitive skills.

Assessment results should be easy to understand. Therefore, students' scores on assessments are typically reported in conjunction with achievement levels. Achievement levels describe varying degrees of knowledge and skills demonstrated by students as determined by their scores on assessments. North Carolina utilizes five achievement levels (Levels 1–5) when reporting results for all state-required assessments that are utilized for accountability. North Carolina originally planned and set cut scores for four achievement levels on its state assessments. The lower two levels describe the need for additional academic support, and the higher two levels describe meeting or exceeding the state's proficiency standard. In March 2014, the State Board of Education added a fifth achievement level describing "on-grade-level" proficiency, in addition to the existing proficiency

levels. The methodology for establishing the additional level was atypical, as it is not common to establish a new achievement level after setting cut scores through a formal standard-setting process. Peer reviewers also expressed this concern in the State Assessment Peer Review Notes for North Carolina (April and June 2016).² Within North Carolina's five achievement levels, there are two levels that ostensibly describe meeting the state's proficiency standard: Level 3, which means achieving on-grade-level proficiency, and Level 4, which means achieving college and career readiness. (Level 5 reflects scores that exceed the state's proficiency standard.) It is typical for a state assessment program to have just one achievement level that describes the state's proficiency standard, rather than two levels, as North Carolina has.

North Carolina's READY accountability system and school performance grades are determined by the proportion of students who achieve Level 3 (i.e., on-grade-level proficiency). The detailed description of Level 3 articulates the need for additional academic support to reach college and career readiness. It is unclear why in North Carolina, grade-level and college- and career-readiness expectations are not synonymous and are not included together in one common proficiency level, rather than being separated into two different proficiency levels. All other documentation, including the READY Accountability Briefs, indicate that the goal of the NCSCOS is to prepare all students to become college and career ready. Undoubtedly, college and career readiness should be the standard that all students in North Carolina should strive to achieve, and proficiency on the statewide assessments should reflect as much.

Conclusions

Best Practices

Overall, North Carolina's statewide assessment system complies with federal requirements. The reading/language arts and mathematics general assessments for grades 3–8, the science general assessments in grades 5 and 8, and the reading/language arts, mathematics, and science general assessments in high school all meet the U.S. Department of Education's assessment peer review requirements.³

Through its application to the IADA, North Carolina has demonstrated its commitment to implementing high-quality assessments and assessment practices, capitalizing on an opportunity to explore alternative testing models and creating an opportunity to demonstrate that the through-grade assessment model is viable at the state level.

The NCDPI, the State Board of Education, and the General Assembly are working together to better understand the use of local assessments and their impact on the amount of time spent on testing. Their efforts should continue to raise awareness around the number of assessments being administered at the local level and provide state and local stakeholders with the information needed to ensure balanced and efficient use of assessments.

² <https://www2.ed.gov/admins/lead/account/nclbfinalassess/nc5.pdf>

³ <https://www2.ed.gov/admins/lead/account/nclbfinalassess/nc6.pdf>

Major Needs and Challenges

Improving education outcomes for all students requires an extensive and collaborative effort at all levels to strengthen the connection between curriculum, instruction, and assessment. It is unreasonable to expect assessment results to improve without significant investment in educational resources, including high-quality curricular and instructional materials. Although the NCDPI provides instructional support materials via its website, there is a critical need for providing additional and ongoing support to LEAs to ensure the implementation and application of high-quality curricular and instructional materials across the state.

North Carolina's theory of action outlines a desire to pursue individualized learning paths, follow competency-based progressions, and have flexible, but structured learning environments. These are ambitious objectives that require a significant shift in the structure of North Carolina's education system, including a significant investment in resources to support such a shift. More clarity is needed to describe how the state's assessment system supports the personalization of learning described in the theory of action, including how North Carolina plans to scale up personalization across the state and how the assessment system ensures a sound basic education for every student in North Carolina.

As described in North Carolina's ESSA theory of action and its IADA application, the relationship between personalized learning, the current state assessment system, and the proposed assessment system is vague. The state's proposal to break up end-of-year assessments into several interim/benchmark assessments would certainly allow for more immediate use of assessment data within the school year, which could lead to increased personalization of learning. However, it is also critical that educators be properly supported to understand how to use the assessment data to better personalize instruction. Asking educators to provide personalized instruction without providing significant professional development, including high-quality curricular and instructional resources, would be futile. Well-designed instructional support materials and a robust communication and dissemination strategy will be needed to fully support North Carolina's vision for more personalization and, ultimately, improved student outcomes as measured by its assessment system.

Although the reports on the use of local assessments and awareness of testing time are important first steps to ensuring balance and efficiency within the assessment system, the state could provide additional support to assist LEAs with assessment audits to identify possible redundancy of assessments. This additional support would help to ensure balance and efficiency throughout the assessment system. Promoting and supporting the use of the NC Check-Ins as interim/benchmark assessments would also support efforts to ensure balance and efficiency by potentially reducing the number of assessments at the local level. If LEAs choose to administer the NC Check-Ins, they could reduce or discontinue the use of many of their local assessments, which would lead to reductions across the state in the amount of time spent on testing. Further, more extensive use of the NC Check-Ins might enable the NCDPI to be more efficient with disseminating resources and support materials across the state.

High-quality assessments cover the full range of relevant state standards, elicit complex student demonstrations and applications of knowledge, provide valid and reliable results for all students, and provide an accurate measure of student growth. North Carolina's existing state-required assessments lack item types that measure the complex reasoning and communication skills that are aligned to the rigorous college- and career-readiness standards described in the NCSCOS. Other state assessment systems include more constructed- and extended-response items, including performance-based items and writing tasks, than currently exist in the North Carolina state

summative assessments. Including items that require students to demonstrate application of their knowledge and skills should improve teaching and learning by emphasizing the importance of complex reasoning and communication skills.

When college- and career-readiness standards were adopted by most states, the level of rigor of the standards and the expectations for students increased sharply. The assessments aligned to these newer standards became more difficult than their predecessors, which in turn depressed proficiency rates. As described earlier, North Carolina originally planned and set cut scores for four achievement levels on its state assessments, but the State Board of Education added a fifth achievement level describing on-grade-level proficiency, in addition to the existing proficiency level (i.e., college- and career-readiness proficiency). However, stakeholders should be confident that achievement-level classifications translate to students' progress toward college and career readiness rather than describing a difference between grade-level proficiency and college- and career-readiness proficiency. A more coherent definition of proficiency and revisions to the achievement levels aligning grade-level expectations and college- and career-readiness expectations are needed to provide stakeholders with a clearer picture of student progress and proficiency.

Although results on the state summative assessments provide important measures of student achievement and growth, these results are even more useful for educators when used in conjunction with other indicators of student progress. As North Carolina's assessment system continues to evolve, state-level policymakers and decision-makers should promote the use of multiple indicators when making decisions about student achievement and progress toward providing all students in North Carolina with a sound basic education (Learning Policy Institute, 2019).

References

- Brunetti, M., Hemberg, B., Brandt, C., & McNeilly, N. (2019). *North Carolina's statewide assessment system: How does the statewide assessment system support progress toward meeting the Leandro tenets?* San Francisco, CA: WesetEd.
- Chattergoon, R., & Marion, S. F. (2016). Not as easy as it sounds: Designing a balanced assessment system. *State Education Standard*, 16(1), 6–9.
- Conley, D. T., & Darling-Hammond, L. (2013). *Creating systems of assessment for deeper learning*. Stanford, CA: Stanford Center for Opportunity Policy in Education.
- Council of Chief State School Officers. (2015). *Comprehensive statewide assessment systems: A framework for the role of the state education agency in improving quality and reducing burden*. Washington, DC: Author.
- Guindon, M., Huffman, H., Socol, A. R., & Takahashi-Rial, S. (2014). *How much testing is taking place in North Carolina schools at grades K–12? An analysis of federal, state, and local required assessments*. Raleigh, NC: Financial and Business Services Internship Program. Retrieved from <http://www.dpi.state.nc.us/docs/intern-research/reports/testing2014.pdf>
- Heritage, M. (2017). Changing the assessment relationship to empower teachers and students. In K. McClarty, K. Mattern, & M. Gaertner (Eds.), *Preparing students for college and careers: Theory, measurement, and educational practice*. New York, NY: Routledge.
- Jobs for the Future. (2018). *Ten principles for a high-quality system of assessments*. Boston, MA: Author. Retrieved from <https://deeperlearning4all.org/wp-content/uploads/2018/02/10-principles.pdf>
- Learning Policy Institute. (2019). *North Carolina's statewide accountability system: How to effectively measure progress toward meeting the Leandro tenets*. Palo Alto, CA: Author.
- National Research Council. (2001). *Knowing what students know: The science and design of educational assessment*. Washington, DC: The National Academies Press.
- Sigman, D., & Mancuso, M. (2017). *Designing a comprehensive assessment system*. San Francisco, CA: WestEd.
- Smithson, J. L. (2015). *A report to the North Carolina Department of Public Instruction on the alignment characteristics of state assessment instruments covering grades 3–8 and high school in mathematics, reading, and science*. Madison, WI: Wisconsin Center for Education Research.
- Stiggins, R. (2017). *The perfect assessment system*. Alexandria, VA: ASCD.
- U.S. Department of Education. (2015). *Fact sheet: Testing action plan*. Washington, DC: Author. Retrieved from <https://www.ed.gov/news/press-releases/fact-sheet-testing-action-plan>

Appendix H. North Carolina's Statewide Accountability System — How to Effectively Measure Progress Toward Meeting the *Leandro* Tenets¹

Introduction

Leandro vs. the State of North Carolina (1997) (*Leandro*) defines a set of outcomes for a sound basic education, including proficiency and success in postsecondary education without the need for remediation. *Leandro* also requires access to the educators and resources needed to meet these outcomes. As such, North Carolina is required to establish a comprehensive set of indicators for evaluating the state's progress toward providing every student with access to a sound basic education. In addition to identifying a set of indicators of progress, the state must establish an accountability system for using measures of performance on these indicators to identify how to address districts and schools that are not providing a sound basic education, including identifying the actions that are necessary and the programmatic initiatives that need to be implemented to improve outcomes for all students, particularly economically disadvantaged students.

The requirements mandated by the Supreme Court of North Carolina (the Court) provide North Carolina with an opening to develop a comprehensive, research-based set of indicators of students' opportunity to learn and have equal access to a sound basic education. These types of indicators would include measures of students' access to the following:

- » An inclusive and supportive learning environment (e.g., using measures of school climate, chronic absenteeism, and suspension)
- » College preparatory coursework (e.g., using measures such as student completion of coursework, students' earning of college credit, and a ratio of the number of students versus the number of course sections) and high-quality career and technical education coursework
- » A high-quality curriculum and learning tools, such as computers
- » Fully qualified teachers
- » Experienced teachers
- » National Board–certified teachers
- » Qualified principals

¹ This study brief summarizes *North Carolina's Statewide Accountability System: How to Effectively Measure Progress Toward Meeting the Leandro Tenets* (Cardichon, Darling-Hammond, Espinoza, & Kostyo, 2019).

North Carolina's current accountability system under the federal Every Student Succeeds Act (ESSA) includes some indicators that could describe progress on providing all students with access to a sound basic education. However, as a whole, the state's system does not provide all the information necessary to demonstrate that schools are meeting the constitutional requirement.

To investigate the adequacy of North Carolina's accountability system, researchers from the Learning Policy Institute (LPI) conducted an evidence-based assessment of the state's current accountability and improvement system, including the state's accountability approach under ESSA and the data available through the state's longitudinal data system, focusing on the measures of progress needed to demonstrate equal access to a sound basic education as required under *Leandro*. This assessment included reviewing research on evidence-based indicators of opportunity to learn; on student outcomes; on the appropriate measures and their use; on the incorporation into school indicators of measures of growth in addition to performance; on effective approaches to school assessment; and on identification of schools for improvement and support.

Based on a review of prior research, the LPI researchers posed the following questions to guide the study:

- » How does the state's accountability and improvement system need to be designed to assess whether schools are meeting the requirements of *Leandro* or making progress toward those requirements?
- » How can this system meet the requirements under *Leandro* and under ESSA?
- » Which indicators of performance should be included in that system, how should they be measured, and for what purpose should they be used?
- » What are the benefits of focusing on both growth and performance for each indicator?
- » What is the most effective and efficient way to use data from these indicators to assess school performance and progress toward meeting the *Leandro* tenets and to inform the most efficient and effective use of resources?
- » What are some promising evidence-based interventions and supports for schools struggling to provide access to a sound basic education?

To answer these questions, the researchers drew on existing studies; examined the ESSA plans of all 50 states and the District of Columbia, including North Carolina's ESSA plan; consulted with national accountability and improvement experts; and conducted new analyses of state and federal data.

Findings

Prioritizing High-Leverage Equity in Opportunity Indicators in North Carolina's Accountability System

North Carolina's accountability system is primarily based on measures of student performance on summative assessments. The system does not currently include a set of opportunity-to-learn indicators to augment the use

of student performance assessments. Opportunity-to-learn indicators should be used to improve the state's ability to measure and report data on the progress toward meeting the *Leandro* requirements. Research shows that data from opportunity-to-learn indicators can provide the state, districts, and schools with the information needed to determine which actions are required to increase students' opportunity for a sound basic education, including which actions are necessary and/or which programmatic initiatives should be implemented (Kostyo, Cardichon, & Darling-Hammond, 2018).

Opportunity-to-learn indicators include measures that can indicate how students, including at-risk students, are experiencing learning — such as the extent to which a positive, inclusive, supportive, and challenging learning environment is being provided to all students. Information on the level of resources provided to schools and students to ensure that students have access to a sound basic education should also be incorporated into the system, including information about whether students have access to well-trained and competent teachers and principals, as explicitly required by the Court.

The LPI research team found that North Carolina's accountability system would benefit from reporting and using data, in the aggregate and disaggregate, at the state, district, and school levels for accountability or improvement purposes. These data include the following:

- » A measure of the extended-year graduation rate in addition to the four-year rate as part of the state's Graduation Rate Indicator (such as the five-year rate, as that is already reported by the state)
- » An exclusionary discipline indicator, measured at least by student suspension rates
- » An indicator of school climate, based on multiple measures
- » An indicator of chronic absenteeism, using the measure already reported at the state level (the rate of chronic absenteeism is based on students who are absent at least 10 percent of the school year)
- » A teacher- and leader-quality indicator, based on multiple measures, such as licensure and experience
- » A college- and career-readiness indicator, based on multiple measures, such as access to and performance in advanced coursework
- » Measures of preschool access
- » Resource and funding information
- » Measures of the ratio of students to school staff (such as teachers, social workers, and guidance counselors)

Using Measures of Growth to Assess School Performance

In addition to incorporating opportunity-to-learn indicators into an accountability system, measuring growth on each indicator, as well as performance, is an effective and important way to better understand what a school is contributing to student learning. Measures of growth provide information that can be used at the state and local levels to prioritize resources and supports for schools that are not providing components of a sound basic

education and are not making any progress toward doing so. Research demonstrates that due to the strong negative relationship between achievement and school-level poverty, focusing primarily on achievement to evaluate school performance and contribution to learning is biased against schools that serve large percentages of students from poverty and rewards schools that serve wealthy populations.

Measuring, reporting, and using growth in performance on individual indicators in accountability and improvement systems is particularly useful for tracking gains and changes in equity gaps. Data on student and school growth can help educators better understand whether the selected supports and interventions are working and where progress is being made. For example, focusing primarily on a percent-proficient measure as it relates to student performance on annual academic assessments fails to make distinctions among students and schools who are further from or closer to reaching proficiency levels and those who have made significant progress or have largely stagnated in their growth. Research also shows that an overemphasis on proficiency, without also examining growth in performance, tends to advantage higher-performing, higher-income, low-minority districts in accountability systems compared with lower-performing, lower-income, and high-minority districts. This advantage is due to the strong negative relationship between achievement and poverty at the school level (Kostyo, Cardichon, & Darling-Hammond, 2018).

Effectively Using Indicators to Monitor Whether Students Are Receiving a Sound Basic Education

How North Carolina uses the previously referenced indicators is as important as *which* indicators it selects to use in its accountability system. Under ESSA, North Carolina “weights” each school’s performance on a limited number of indicators and rolls up performance into a single summative rating, assigning an A, B, C, D, or F rating. Unfortunately, this approach to describing and reporting school success obscures performance on individual indicators and focuses attention on the summative rating and not on the individual components and whether those components are improving. Just as parents want and need student report cards that show how their children are learning in different subjects — reading, math, science, social studies — as well as how they are attending and behaving in the classroom, under *Leandro*, North Carolina needs a reporting system that enables it to identify how schools and the students in them are performing in particular areas so that they can design and target useful interventions for those who need them. Important factors and data related to school performance can be overlooked when they are buried underneath a single summative score. Thus, schools identified for improvement (under either ESSA or for *Leandro* purposes) may not have a clear understanding of where and how they should focus and invest their improvement efforts. This can result in students’ and schools’ needs being unidentified and unaddressed.

There are a number of approaches to achieving a more nuanced and well-rounded understanding of schools’ progress and performance that North Carolina can consider that have been adopted by other states moving away from the use of a single summative score because they found it masked areas of needed improvement. Based on other state models and the underlying research (Darling-Hammond et al., 2016), there are a number of decision rules that North Carolina could use to evaluate progress and identify schools for support under *Leandro* and ESSA. These rules could be designed to (1) make sure all indicators count in the accountability system while also meeting the requirements of ESSA regarding the weight of academic indicators; (2) include measures of students’ growth along with performance; (3) avoid overlooking schools in need of support by masking subgroup

performance or performance on individual indicators; and (4) be transparent in terms of overall performance on individual indicators and by subgroups of students.

Using Data to Inform and Meet School Improvement Goals

The data that North Carolina collects through its accountability system can be used for different purposes, including to identify schools for support and improvement, to inform school improvement efforts, and to report to the public. To meet the *Leandro* requirements, North Carolina should use these data to assess progress toward compliance with each component across all schools and to inform the actions that need to be taken where compliance is not happening. Similar to an approach taken by California, North Carolina could establish a set of priority areas aligned with the requirements under *Leandro*. The state could develop a local accountability plan template aligned with these priority areas that would serve as a tool for districts to use to guide goal setting and planning at the local level. These plans would be provided to the state to determine the level of state support that should be provided. Further, districts would update these plans to identify areas of progress and challenge and to describe actions that will be taken to address the areas of challenge. For example, to support districts in making planning and budgeting decisions, districts could complete a state-provided accountability plan that requires districts to articulate their three-year policy goals and accompanying budget allocations across the *Leandro* tenets. These plans could be updated annually in response to data on how schools are progressing in meeting the requirements under *Leandro*.

Conclusions

North Carolina's accountability system would more accurately assess whether individual schools are providing or making progress toward providing a sound basic education and which types of supports are needed if the state would do the following:

- » Include a comprehensive set of opportunity-to-learn indicators and student-outcome indicators that describe state-, district-, and school-level progress toward providing all students with access to a sound basic education.
- » Structure the system to measure and reward school growth in performance on individual indicators, in addition to status on select indicators, to better measure progress toward meeting the requirements of *Leandro*.
- » Use a process for identifying schools for support and improvement that incorporates a set of decision rules to meet the law's requirements to encourage greater attention to the full set of measures, to offer more transparency about how school performance factors into identification, and to support more strategic interventions than those informed by only a single rating.

The data from North Carolina's accountability system can be used at the state, district, and school levels to guide planning and budgeting decisions and to assess school progress and improvement efforts.

Under *Leandro*, the state needs an accountability system that can accurately assess school performance, progress, and areas of need and provide the information needed to target the appropriate resources and supports. North Carolina is in a strong position to do so based on the data the state already collects. The state can build on these data, incorporate additional measures of progress, and adopt new approaches to using these data to meet the requirements under *Leandro* — ensuring each school is making meaningful progress toward providing a sound basic education.

References

- Cardichon, J., Darling-Hammond, L., Espinoza, D., & Kostyo, S. (2019). *North Carolina's statewide accountability system: How to effectively measure progress toward meeting the Leandro tenets*. Palo Alto, CA: Learning Policy Institute.
- Darling-Hammond, L., Cardichon, J., & Melnick, H. (2017). *Identifying schools for support and intervention: Using decision rules to support accountability and improvement under ESSA* (Policy brief). Palo Alto, CA: Learning Policy Institute.
- Darling-Hammond, L., Bae, S., Cook-Harvey, C., Lam, L., Mercer, C., Podolsky, A., & Stosich, E. (2016). *Pathways to new accountability through the Every Student Succeeds Act*. Palo Alto: Learning Policy Institute.
- Kostyo, S., Cardichon, J., & Darling-Hammond, L. (2018). *Making ESSA's equity promise real: State strategies to close the opportunity gap*. Palo Alto, CA: Learning Policy Institute.

Appendix I. An Exploration of School Success Factors to Inform the *Leandro* Action Plan¹

This study highlights key factors that contribute to the success of schools that show strong growth in student achievement, including students who have generally shown lower achievement levels and graduation rates. At the start of this study, the research team from the Friday Institute identified a set of nine research-based success factors that provided a framework for the data collection and analysis. The researchers then selected a set of North Carolina schools and districts that largely serve economically disadvantaged students and that have shown some success in fostering growth in the students' achievement. A multisite case study was conducted. The study involved analyses of plans, initiatives, working conditions, student achievement, and other available information; site visits with interviews, focus groups, and classroom observations; and follow-up communications.

This report draws on information from the individual case studies to exemplify each of the success factors. Overall, it helps to document examples of outstanding work being done throughout North Carolina by knowledgeable, talented, dedicated educators to the benefit of the students, their families, their communities, and the state.

This report is organized into four sections:

1. Success Factors Framework Overview
2. Research Approach
3. Findings, Organized by Success Factor
4. Conclusion

Success Factors Framework Overview

The Success Factors Framework, herein referred to as success factors, was developed by the research team and outlines nine research-based practices that lead to conditions in schools that enable student success. When implemented in concert with one another, the success factors help foster effective districts and schools. The success factors are listed below (the research base for each element in the framework is discussed in Appendix A of the full research report for this study).

Success Factor #1: School Culture. A school culture in which all adults are committed to every student's success and all students have supportive relationships with adults and experience a comfortable and safe environment that supports their social, emotional, and academic growth.

Success Factor #2: Principal Leadership. A principal in every school who is well prepared to serve as both a change leader and an instructional leader, to recruit and retain highly qualified teachers, and to cultivate a successful teaching and learning environment for all students.

¹ This study brief summarizes *Leandro Action Plan: Ensuring a Sound Basic Education for All North Carolina Students Success Factors Study* (Townsend, Mullennix, Tyrone, & Samberg, 2019).

Success Factor #3: Instructional Staff. A sufficient staff of teachers and others who support students' learning, with all instructional staff well prepared in evidence-based instructional approaches, in content knowledge in the areas they teach, and in strategies for successfully working with students with diverse backgrounds and learning differences.

Success Factor #4: Personalized Learning. Effective, evidence-based systems and practices for personalizing learning that account for variability in the pace, pathway, preferences, and needs of each student.

Success Factor #5: Curriculum Resources and Digital Tools. Curriculum resources and digital tools to support students' learning of the North Carolina Standard Course of Study and more advanced topics.

Success Factor #6: Formative Assessment. Timely and ongoing formative assessments, aligned with the North Carolina Standard Course of Study, used to inform and adapt instructional practices, to consistently monitor student learning, and to develop personalized learning pathways for each student.

Success Factor #7: Experiential Learning. Opportunities within and beyond the school walls for students to pursue their own interests and strengths and participate in experiential learning in which they apply their knowledge, collaborate, create, engage in authentic problem solving, and become self-directed lifelong learners.

Success Factor #8: Comprehensive Staffing and Supports. Comprehensive staffing and supports for learning that go beyond classroom instruction to address — through partnerships with families, community organizations, and other schools — social and emotional development, physical and psychological health, hunger, and adverse childhood experiences.

Success Factor #9: Flexible Funding, Time, and Space. Affordance of flexibility and autonomy in areas such as funding structures, calendar options, and use of physical and virtual space so that school and district leaders can tailor learning environments to meet the unique needs of their students.

Research Approach

This qualitative research study utilized a multisite case study approach. A case study methodology enables researchers to conduct in-depth examinations of a program using a variety of data collection procedures over a sustained period of time (Merriam, 1998; Yin, 2017). For the purpose of this study, each case was defined in one of two ways: as an individual school ($n=3$) or as a school district ($n=4$). There were 207 participants in the study from various stakeholder groups, including district leaders, school leaders, teachers, parents, students, and community members. Case-study sites for individual schools were the Franklin County Early College High School, the Henderson County Career Academy, and the Northeast Academy for Aerospace and Advanced Technologies. The case-study district sites were Edgecombe County Public Schools, Greene County Public Schools, Newton-Conover City Schools, and Rowan-Salisbury Schools.

This study was guided by the following research questions:

1. What exemplars of success-factor implementation exist?
2. How do select schools/districts actualize success factors?

3. What elements are necessary for supporting factors for student success?
4. What barriers are faced by schools as they work to create conditions for student success, and how do schools overcome them?

Initially, archival data were used to identify districts and schools that demonstrated success with at-risk students and could therefore be considered for inclusion in the study. These included publicly available census data, economic development plans and initiatives, demographic data, performance data, principal and teacher turnover data, school improvement plans, technology plans, website mining, program design information, mission statements, vision statements, and Teacher Working Conditions Survey data. After reviewing the information, contact was made with district staff to ascertain interest in participating in the study. Potential participants were asked to review the Success Factor Framework to determine which elements might be highlighted during site visits. Those who were selected to be participants represented schools and districts from different regions of the state to ensure an inclusive study.

Between October 2018 and February 2019, a one- to two-day site visit was conducted at each of the participating schools and districts. During each site visit, researchers followed a detailed protocol that included artifact collection (e.g., brochures, student work, newsletters), school tours, classroom observations, and face-to-face interviews or focus groups with different stakeholder groups (e.g., district and school leaders, teachers, students, parents, other community members). The artifacts were used as evidence to contextualize practices taking place at each site. Detailed field notes were gathered and analyzed to provide requisite answers to the research questions. Most interviews and focus groups were digitally recorded, with permission of the participants. Researchers separated by success factor the information obtained, then further categorized the information into themes, recognizing the many interactions among the success factors.

Findings, Organized by Success Factor

The study's findings, organized by the nine success factors, are briefly summarized in this section.

School Culture

District and school personnel in each case-study site approached creating a positive school culture in a different manner, but all alluded to the important role a positive school culture plays in setting the tone to ensure other practices and initiatives could take root and grow. The following practices were observed as ways that school leaders were shaping positive school culture:

- » Providing a family-like atmosphere
- » Setting high expectations
- » Promoting risk-taking
- » Empowering students

- » Engaging in intentional culture building
- » Communicating clearly

For example, the Franklin County Early College High School, a high-poverty rural high school that collaborates with a local community college, empowered its students by engaging them in the teacher hiring process — giving them the opportunity to ask potential new teachers questions and provide feedback to the hiring committee. And in Greene County Public Schools, a small, high-poverty rural district, administrators made a concerted effort to ensure new teachers understood the culture of both the school and the community by taking them on community tours, thereby providing them with a sense of the full student experience from home to school.

Principal Leadership

The role of a principal is multifaceted and is crucial in creating the conditions necessary to support progress for each of the success factors. The prevailing thought among the case-study principals was that their leadership preparation — which included traditional master’s of school administration programs as well as alternative programs, such as the Northeast Leadership Academy, which offers a residency program — provided the necessary foundation for their leadership practice. However, they believed that actively serving in the administrative role was what best sharpened their leadership skills. Across each of the case-study sites, principals worked tirelessly to enact a series of processes and procedures to actualize each school’s overarching mission and vision. Effective leadership practices in which case-study principals were engaged included:

- » Offering social and emotional support to students, staff, and the school community
- » Supporting staff freedom and autonomy in school decisions
- » Engaging in intentional relationship building within the school community

At the Henderson County Career Academy, an alternative, innovative high school that collaborates with a community college, the principal created a culture in which distributive leadership was at the core of the school functions. Teachers at the school shared that they felt empowered to make choices about their school and classroom based on their own professional judgment. And at the Franklin County Early College High School, the principal supported efforts to enhance the social and emotional health of students, staff, and the school community to remove barriers to student achievement.

Instructional Staff

Retaining the best possible instructional staff was a high priority for school and district leadership across all cases in the study. Teachers and leaders were eager to share their opinions about school improvement efforts and their role in the process. The following practices surfaced as important for staff growth and student success:

- » Engaging in teacher collaboration
- » Acting as teacher-leaders

- » Participating in professional development
- » Providing instructional support
- » Offering student assistance

Newton-Conover City Schools, a small urban district with a primarily economically disadvantaged student population, created Teacherpreneurs, a teacher-leader program that enabled participants to identify problems of practice within their schools and develop novel solutions. Greene County Public Schools, a small rural district, took a different approach with teacher-leaders. Through its Teacher Leadership Academy, the participants — who are effective, experienced teachers — offer one-on-one coaching opportunities and facilitate professional development sessions for the district.

Personalized Learning

Although the academic standards remain constant for each subject and grade level, the mechanism for mastering the material varies when employing a personalized learning approach. Personalized learning enables students to have their individual needs and preferences addressed. The manner in which educators from the case-study sites deployed personalized learning varied to match school goals, student needs, and available resources. The research team observed educators facilitating personalized learning through several guiding actions, including:

- » Allowing student choice
- » Providing scaffolded learning
- » Encouraging collaborative learning
- » Engaging in innovative approaches

At Rowan-Salisbury Schools, a designated Renewal School System (a new system in the state that gives a district more flexibility if it has a lot of struggling schools), the district endeavors to provide personalized experiences that meet both academic needs and personal preferences. For example, the schools used a web-based “playlist” (e.g., a menu of learning activities) tailored for each student. A Rowan-Salisbury senior administrator explained, “No two children who are going to Rowan-Salisbury Schools are doing the same thing.” The Franklin County Early College High School adopted an 80/20 model in which teachers provide direct instruction for approximately 20% of the instructional time; for the other 80%, students carry the cognitive load by engaging in a variety of tasks that could include writing, problem solving, and working in groups.

Curriculum Resources and Digital Tools

The state’s transition to digital and personalized learning and the use of varied formats — such as online tools, multimedia materials, and web-based applications — adds to both the opportunities and the challenges of selecting these resources and using them to support teaching and learning. Schools across the study sample innovatively created and implemented curriculum resources and digital tools through four guiding approaches:

- » Offering blended learning opportunities
- » Allowing design-thinking activities
- » Providing digital tools
- » Offering career and technical education courses

Greene County Schools opted to stop investing in commercially available, “off-the-shelf” science curricula, investing instead in developing its own curricula that considers its students’ individual social-emotional backgrounds, instructional needs, and personal interests. And Shuford Elementary, in Newton-Conover City Schools, shifted to a blended learning approach in which e-learning is incorporated into all facets of the school’s educational program.

Formative Assessment

The case-study schools used formative assessment as a mechanism to measure student learning. Both high-tech (e.g., computer-based, mobile applications) and low-tech (e.g., paper, hand signals, exit slips) formative assessment options had a place in each classroom. Using formative feedback enabled teaching and learning to be adjusted as needed to ensure the best possible learning outcomes. Case-study sites implemented formative assessment with their students in several ways:

- » Engaging in conferencing with students
- » Administering traditional tests (e.g., quizzes and tests)
- » Employing diagnostic assessment data
- » Using multitiered targeted support systems

Edgecombe County Public Schools’ Pattillo Middle School created an extensive system of conferencing with students, which was used as a formative assessment. As a Pattillo administrator explained, “Every Monday, we do ‘temperature checks’ with the kids. We read through these [written comments from each student expressing concerns about academic and social issues] and make follow-ups with the students who need that follow-up, based on their feedback.” The Henderson County Career Academy uses multiple-choice tests and quizzes on the online platform Edgenuity to help teachers quickly gather data to inform areas of further instruction.

Experiential Learning

Enhancing and expanding learning through experiential learning was a priority at each of the case-study sites. Seen as a way to help students connect to the academic content and, in many cases, as a way to provide true context for learning, experiential learning linked students to career and community interests. Approaches to experiential learning among study participants included:

- » Offering programs based in STEM (science, technology, engineering, and math) and STEAM (science, technology, engineering, the arts, and math)

- » Providing inquiry-based learning
- » Encouraging learner agency
- » Developing community partnerships
- » Pioneering innovative approaches
- » Engaging in service-learning opportunities

At the Northeast Academy for Aerospace and Advanced Technologies, a public charter school serving students from multiple counties, students work daily to identify problems to solve in real-world contexts. And at Rowan-Salisbury Schools, students are highly involved in service-learning at a variety of nonprofit organizations, such as Habitat for Humanity, Meals on Wheels, and the Rowan Helping Ministries.

Comprehensive Staffing and Support

Removing barriers that prevent students from fully focusing on academics is at the core of this success factor. Ensuring there is comprehensive staffing and support to meet students' nonacademic needs (e.g., nutrition, housing, mental health, social and emotional health) is key to ensuring students have the opportunity to better focus on their learning. Garnering support and resources from individuals within the school district and from external agencies expands the level of service that students and their families receive. Efforts to provide comprehensive staffing and support services included:

- » Providing students with access to support staff
- » Brokering student-support services with community partners
- » Implementing social-emotional learning resources
- » Offering support to families

At Rowan-Salisbury Schools, there is a concerted districtwide effort to provide access to mental health services and ensure sufficient staffing for social services. The district provides professional development focused on how to support students living in poverty. To this end, behavioral specialists have been added to the staff at Isenberg Elementary to meet the unique needs of these students. The Henderson County Career Academy has a full support staff that includes a principal, two assistant principals, a youth recovery specialist, a dropout prevention and recovery counselor, a graduation coach, a guidance counselor, a career development coordinator/postsecondary counselor, a school nurse, a teacher assistant/online learning support specialist, a Homelink representative (Homelink is a program for students who need to be able to study at home instead of in a school setting), two mental health specialists, a school resources officer (in this case, a county deputy sheriff), and a Newcomer Center representative who also teaches English as a second language.

Flexible Funding, Time, and Space

Participating district leaders, school principals, and teachers from each case-study site expressed a need for autonomy to make the appropriate decisions regarding setting the right context for the teaching and learning transpiring in their schools. There was an overwhelming desire to be trusted by authorities to make the decisions that would be best for their students. The following actions describe how some sites utilize flexibility:

- » Allowing hiring flexibility
- » Providing flexible student schedules
- » Using remote learning
- » Allowing flexible funding
- » Utilizing school-built models for success

Newton-Conover City Schools' Discovery High School has exercised flexibility in how it has structured learning time, with a unique schedule that consists of periods ranging from 46 minutes to 140 minutes. And the Northeast Academy for Aerospace and Advanced Technologies, a charter school, takes advantage of a remote learning protocol that enables students to continue learning in the event of inclement weather, thereby avoiding having to extend the school year into the summer.

Conclusion

The Success Factors Framework reflects a set of enabling conditions necessary for school and student success. Although presented separately in this report, success factors often work together to seamlessly address district, school, teacher, and student needs. They are interconnected, and, in many cases, they overlap to the extent that one factor relies on another for its proper execution. As evidenced by the many examples identified by this study, schools and districts varied widely in how they implemented processes to enable the conditions associated with specific success factors. Implementation of strategies related to these success factors was need- and context-specific — there is not necessarily a right or wrong way to actualize the elements of the framework. Ultimately, schools and districts must be afforded the flexibility to determine how they should approach cultivating environments conducive to the success of their students.

References

- Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd ed.). San Francisco: Jossey-Bass Publishers.
- Townsend, L., Mullennix, A., Tyrone, B., & Samberg, M. (2019). *Leandro Action Plan: Ensuring a sound basic education for all North Carolina students success factors study*. Raleigh, NC: William and Ida Friday Institute for Innovation at North Carolina State University.
- Yin, R. K. (2017). *Case study research and applications: Design and methods*. Los Angeles, CA: SAGE.

Appendix J: Costs and Assumptions for Critical Need Areas and Action Items

To inform the state's planning efforts, the study team conducted further investigation into estimated costs and assumptions for a set of the major action items. Exhibit J1 identifies the action item, the critical need area, and the associated assumptions made around the costs linked to that action. Further references are included that help to triangulate original calculations of the study team with other, existing documentation provided publicly on that topic.

Exhibit J1. Cost assumptions behind action items included in critical need areas

Action item	Critical Need	Costs and assumptions																																
Rebuild the staff capacity within the North Carolina Department of Public Instruction (NCDPI) to lead district and school transformation.	Regional and statewide system of support	During implementation of North Carolina’s Race to the Top grant, the District and School Transformation division at the NCDPI was staffed to provide school improvement and school turnaround supports to the lowest-performing districts and persistently low-achieving schools in the state. Though the number of positions currently necessary would need to be determined based on the current number of schools identified as Comprehensive Support and Improvement and Targeted Support and Improvement schools, this staffing plan can inform forward-looking efforts to rebuild staff capacity at the NCDPI. Likewise, the personnel costs included below can inform estimated costs of building staff capacity and would need to be updated based on inflation. These personnel costs were originally budgeted for 2011–2014.																																
		<table><tr><th>Job description</th><th>Employees</th><th>Base salary</th><th>Total</th></tr><tr><td>District Transformation Coaches to work with the 16 lowest-performing districts</td><td>10</td><td>\$106,787</td><td>\$1,067,870</td></tr><tr><td>School Transformation Coaches to assist the 132 persistently low-achieving schools</td><td>16</td><td>\$ 97,279</td><td>\$1,556,464</td></tr><tr><td>Instructional Coaches to work with teachers and administrators in the 132 persistently low-achieving schools</td><td>38</td><td>\$ 84,691</td><td>\$3,218,258</td></tr><tr><td>Instructional Review Coaches to work with the 132 persistently low-achieving schools and 16 lowest-performing districts</td><td>5</td><td>\$ 92,922</td><td>\$ 464,610</td></tr><tr><td>Team Leads to manage operations and oversight of coaching teams</td><td>3</td><td>\$106,787</td><td>\$ 320,361</td></tr><tr><td>Program Assistants to support other staff</td><td>3</td><td>\$ 35,000</td><td>\$ 105,000</td></tr><tr><td>Total</td><td>75</td><td></td><td>\$6,732,563</td></tr></table>	Job description	Employees	Base salary	Total	District Transformation Coaches to work with the 16 lowest-performing districts	10	\$106,787	\$1,067,870	School Transformation Coaches to assist the 132 persistently low-achieving schools	16	\$ 97,279	\$1,556,464	Instructional Coaches to work with teachers and administrators in the 132 persistently low-achieving schools	38	\$ 84,691	\$3,218,258	Instructional Review Coaches to work with the 132 persistently low-achieving schools and 16 lowest-performing districts	5	\$ 92,922	\$ 464,610	Team Leads to manage operations and oversight of coaching teams	3	\$106,787	\$ 320,361	Program Assistants to support other staff	3	\$ 35,000	\$ 105,000	Total	75		\$6,732,563
		Job description	Employees	Base salary	Total																													
		District Transformation Coaches to work with the 16 lowest-performing districts	10	\$106,787	\$1,067,870																													
		School Transformation Coaches to assist the 132 persistently low-achieving schools	16	\$ 97,279	\$1,556,464																													
		Instructional Coaches to work with teachers and administrators in the 132 persistently low-achieving schools	38	\$ 84,691	\$3,218,258																													
		Instructional Review Coaches to work with the 132 persistently low-achieving schools and 16 lowest-performing districts	5	\$ 92,922	\$ 464,610																													
		Team Leads to manage operations and oversight of coaching teams	3	\$106,787	\$ 320,361																													
		Program Assistants to support other staff	3	\$ 35,000	\$ 105,000																													
Total	75		\$6,732,563																															

Action item	Critical Need	Costs and assumptions												
Fund Smart Start at the level to enable communities to use the flexible funds to increase quality, access, and support for at-risk children and families.	High-quality early childhood education	<p>Currently, the Smart Start program is funded at a level that allows the program to meet only 5% of the need of children and families for early childhood education (ECE) programs. This is short of the original goal of reaching 25% of need (based on a formula developed by the state at the program’s inception) (North Carolina Partnership for Children, 2019). The table below identifies the necessary increases in resources to meet higher proportions of children in need.</p> <table><tr><th>Percent of ECE need</th><th>Total cost of supporting ECE need</th></tr><tr><td>5%</td><td>\$147,013,453</td></tr><tr><td>10%</td><td>\$279,147,357</td></tr><tr><td>15%</td><td>\$418,721,036</td></tr><tr><td>20%</td><td>\$558,294,715</td></tr><tr><td>25%</td><td>\$697,868,394</td></tr></table>	Percent of ECE need	Total cost of supporting ECE need	5%	\$147,013,453	10%	\$279,147,357	15%	\$418,721,036	20%	\$558,294,715	25%	\$697,868,394
Percent of ECE need	Total cost of supporting ECE need													
5%	\$147,013,453													
10%	\$279,147,357													
15%	\$418,721,036													
20%	\$558,294,715													
25%	\$697,868,394													
Expand the NC Pre-K program to provide high-quality full-day, full-year services to all at-risk 4-year-olds.	High-quality early childhood education	<p>According to a study conducted by the North Carolina Department of Health and Human Services in February 2017, the overall cost for a slot in the NC Pre-K program is \$9,126, with state funding covering 61% of the cost, or approximately \$5,534 (General Assembly of North Carolina, 2017). The program parameters are defined as 6.5-hour days for 10 months per year.</p> <p>The 2017 per-slot rate of \$9,126 would be adjusted to \$10,221, or a 12% increase, if it were updated to reflect additional support for the following elements: (a) early childhood educator professional development to ensure skills stay current with effective practice; (b) provision of wrap-around services for students, such as social workers and counselors; (c) transportation of students to and from programs; and (d) improvements in program quality. On average, the rate of \$10,221 per slot would provide approximately \$76,700 for a child care center with 14 students per classroom and 5 classrooms. Note that these costs do not include compensation for early childhood educators to achieve parity with elementary classroom teachers.</p> <p>Further, the per-slot rate for a child care center would need to be adjusted to account for appropriate coverage for administrative duties, such as the processing of records for eligible families and reimbursements from federal and state sources. If we use a 10% additional cost — assuming that the state shifts a significant amount of federal resources into other programs to reduce paperwork for compliance — the additional cost would support necessary dollars for this task. This would bring the average per-slot rate to \$11,630. If the state were to meet this full cost per slot based on current students served, the annual cost would be \$52 million in state funding for the NC Pre-K program. That annual cost includes an \$11 million transfer of funds into the NC Pre-K program to offset federal funding support.</p> <p>A full day would be defined as 9 hours, which includes 6.5 hours of direct student instruction with teachers and 2.5 hours with outside/community providers. A full year would be defined as 222 days, which excludes Saturdays, Sundays, and major holidays that follow a federal or state government calendar. Changing NC Pre-K to a full-day, full-year model would equate to an additional 22 days, and costs associated with 2.5 hours of additional activities and coverage for children each day.</p>												

Action item	Critical Need	Costs and assumptions
Adequately fund the child care subsidy system to eliminate all waiting lists.	High-quality early childhood education	To adequately fund the child care subsidy and serve all who are on the waiting list (approximately 28,000 children currently), assuming an average payment of about \$6,200 a year, the cost would be an additional \$173 million per year (General Assembly of North Carolina, 2017).
Provide high-quality, comprehensive mentoring and induction support for novice teachers in their first three years of teaching, including by expanding the New Teacher Support Program so that it is able to support all new teachers.	Qualified, well-prepared, and diverse teachers	The New Teacher Support Program is currently operating at six University of North Carolina campuses and is serving only 1,100 of the 15,595 North Carolina teachers with fewer than three years of experience. The estimated cost is \$2,200 per teacher (about 40% of actual cost, subsidized by state appropriations and grants; some use federal Title funds).
Improve and expand the Teaching Fellows program by increasing the overall funding to support additional awards; increasing the number of partner institutions from the current five to include programs that serve the different regions of the state and to include minority-serving institutions; developing recruitment strategies that inform and attract candidates of color to apply; reinstating the additional leadership training that Teaching Fellows previously received, including training on topics such as culturally responsive and trauma-informed practices and teaching students with disabilities; and providing a shorter payback period for those who teach in a high-poverty school.	Qualified, well-prepared, and diverse teachers	The current funding for the Teaching Fellows program is \$8,250 per year per scholarship (student) and \$33,000 per candidate over four years. The state should estimate about 1,000 candidates per year, targeted to high-need fields and locations. The approximate annual cost is \$8.25 million per year.

Action item	Critical Need	Costs and assumptions
Implement differentiated staffing models that include advanced teaching roles and additional compensation.	Qualified, well-prepared, and diverse teachers	<p>North Carolina can help districts find the funds for the initial planning and training costs related to transitioning to new roles. Specifically, it could do the following:</p> <ul style="list-style-type: none"> • Expand the Teacher Compensation Models and Advanced Teaching Roles Pilot program to allow all districts to apply for one-time startup funds. • Establish a 5- to 10-year Transition to Advanced Teaching Roles program that leads cohorts of districts and schools through a common design process. This structure could be especially helpful to smaller districts that are located near each other. A cohort model can increase overall capacity and provide a community of practice. • Fund the design of advanced teaching roles as a school improvement strategy and expand eligibility for designation as a Restart school to provide staffing flexibility that facilitates the district and school design decisions. • Redirect a portion of existing funding streams dedicated for low-performing schools. Title I school improvement funds and Title II educator effectiveness funds are two sources that state and local education agencies nationwide have tapped to fund transitions to advanced teaching roles. <p>The funds would need to be both significant and time limited. Districts and schools would need enough funds to do in-depth planning and training. Smaller districts (4,000 or fewer students) could transition with \$300,000 to \$500,000 over three to five years, larger districts (greater than 20,000 students) would require \$1.5 million to \$2.0 million, and midsize districts (4,001 to 20,000 students) would require \$750,000 to \$1.25 million. These investments at the district level would be spread over 5 to 10 years. They represent a relatively small investment and would leave local education agencies and schools with sustainably funded advanced roles for the long term.</p>
Provide funding for Grow Your Own and 2+2 programs that help recruit teachers in high-poverty communities through expanding the TA to Teachers program; expanding 2+2 models that allow candidates to start their program in community colleges; and expanding high school career academy programs.	Qualified, well-prepared, and diverse teachers	<p>To expand the TA to Teachers program, calculations can be based on the assumption that approximately 5% of teaching assistants (TAs) would participate. In 2017–2018, there were 21,000 TAs, yielding an estimated 1,050 participants.</p> <p>In order to expand 2+2 models to make teacher preparation more affordable and more accessible in rural areas and to enable recruitment of more diverse candidates, a greater investment might be required to develop pathways and associated articulation agreements and to allow four-year institutions to have faculty teach on rural community college campuses where there is no four-year institution nearby. As a baseline for considering a possible investment, in 2019, California authorized \$500,000 per program to develop 2+2 pilot programs.</p> <p>The locally funded North Carolina Teacher Cadet Program is delivered in high schools through a specific curriculum. The cost to train instructors for the program is \$400 per curriculum workshop attendee. The workshop trains instructors in how to deliver the curriculum for students.</p>

Action item	Critical Need	Costs and assumptions
Continue to expand access to high-quality principal preparation programs, including through the TP3 and the Principal Fellows Program.	Qualified, well-prepared, and diverse teachers	North Carolina needs approximately 300 new principals per year. The estimated annual TP3 cost for 300 new principals per year is \$10.5 million (the principal scholarship is \$30,000, which principals do not have to pay back as long as they work in a North Carolina school for four years within six years of graduating).
Expand, scale, and/or replicate statewide the successful professional learning opportunities for current principals and assistant principals.	Qualified, well-prepared principals	Programs currently offered by the North Carolina Principals and Assistant Principals Association, such as the Distinguished Leadership in Practice program and the Future Ready Leadership program, should serve as models to be expanded, scaled, and/or replicated throughout the state. The Distinguished Leadership in Practice program's public cost is \$245,000 for 100 to 120 participants, with an average cost of \$2,450 to \$2,083 per participant.
Provide positional funding to increase the number of specialized instructional support personnel (SISP) to meet the national recommended ratio.	Resources for economically disadvantaged students	The State Board of Education derived an initial estimate of \$700 million to \$800 million annually to fully staff SISP positions throughout the state. The recommendation to begin with a focus on high-poverty schools will reduce the initial annual cost.
Provide resources, supports, and flexibilities for low-performing and high-poverty schools to address out-of-school barriers to learning, using a community-schools or other evidence-based approach that meets their specific needs.	Resources for economically disadvantaged students	A critical component to implementing a community schools approach is a full-time community-schools coordinator/leader at each site. A typical salary for a site leader is similar to that of an instructional coach. Based on the state-provided salaries of coaches currently working statewide, an estimated annual salary for community-schools site leaders is approximately \$60,000, plus 30% of salary for benefits.

References

- General Assembly of North Carolina. (2017). *Current Operations Appropriations Act of 2017*. No. 257. Retrieved from <https://www.ncleg.net/Sessions/2017/Bills/Senate/PDF/S257v9.pdf>
- North Carolina Partnership for Children, Inc. (2019). *Composition of Smart Start's funding formula*. Raleigh, NC. Author.

Appendix K: Proposed Allotment and Funding Distribution Changes to Direct More Funding to Students of Need and Promote Flexibility in the Use of Funds

When increasing investment in the public education system, it is essential to consider how best to distribute the additional resources so they are aligned to the needs of the system. This section provides further detail about how the allotment system could be updated to provide more funding to students of need and promote flexibility in the use of funds by increasing various transfer provisions among the resource codes. In particular, Exhibit K1 provides further detail about recommended changes to the current allotment system to align to the recommendations of this study.

These suggestions come primarily from the cost function analysis that investigates the relationship between spending and student outcomes in North Carolina (see *A Study of Cost Adequacy, Distribution, and Alignment of Funding for North Carolina's K–12 Public Education System*, Willis et al., 2019, for further details). This analysis investigated, among other things, the necessary resource needs for student populations (e.g., low-income students, English learners, and students with disabilities) as well as the external factors that impact costs for local school systems (e.g., geographic cost differences and economies of scale). Previous research supports using the results of the cost function analysis as the basis to determine the level of additional funding consistent with the aforementioned factors (Duncombe & Yinger, 2004). The primary reason the cost function analysis is the best current adequacy-costing-out methodology for calculating student weights is that the modeling is able to isolate certain student or school characteristics and identify the relationship of spending to such factors.

The study found that the amount of funding associated with supporting higher concentrations of these student populations (i.e., low-income students, English learners, and students with disabilities) increased continuously. That is, unlike many existing formulas for providing additional resources for these student populations, this study suggests that funding would need to increase continuously to align spending to expected outcomes for students.

Exhibit K1 provides recommended changes to revise the state funding model to provide adequate, efficient, and equitable resources. It does so by modeling how the existing allotment system may be adjusted to account more appropriately for the factors described above. As shown below, the proposed funding allotment changes are broken into the three phases identified in the *Leandro* Action Plan. These suggested allotment changes to North Carolina's school funding formula are designed to progressively move the state toward a school funding model: (a) that is able to more accurately adjust transferability among various resource codes; (b) that is able to more accurately account for the needs of low-income students, English learners, and students with disabilities in schools and districts; (c) that is able to more accurately account for external factors that influence the costs associated with providing students with appropriate levels of support, including geographic cost and economies of scale; and (d) that incorporates the local school system's ability and willingness to invest in public education as one factor for calculating the state's effort, that is, account for local contribution to base funding. These are some of the most common elements used by other states in establishing a foundation school funding formula.

Exhibit K1. Proposed allotment changes to North Carolina's school funding formula

PRC1	Allotment type	FY2019 allotment funds (%)	Allotment	Phase I	Phase II	Phase III
001	Position	50.7%	Classroom Teachers	Adjust this allotment for low-income student concentration and allow transfer for any purpose at the average salary level	Adjust for geographic cost differences	Account for local contribution to base funding
032	Funding	9.4%	Children with Special Needs	Increase the cap on Exceptional Children funding	Adjust for geographic cost differences	
013	Position	5.4%	Career and Technical Education — Instruction		Adjust for geographic cost differences and economies of scale	Account for local contribution to base funding
007	Position	5.7%	Instructional Support	Adjust this allotment for low-income student concentration and allow transfer for any purpose at the average salary level	Adjust for geographic cost differences	Account for local contribution to base funding
003	Funding	4.4%	Non-Instruction Support Personnel		Adjust for geographic cost differences	Account for local contribution to base funding
027	Funding	4.3%	Teacher Assistants	Adjust this allotment for low-income student concentration and allow transfer for any purpose	Adjust for geographic cost differences	Account for local contribution to base funding
005	Position	4.2%	School Building Administration	Adjust this allotment for low-income student concentration and allow transfer for any purpose at the average salary level	Adjust for geographic cost differences	Account for local contribution to base funding
056	Funding	4.0%	Transportation			

PRC1	Allotment type	FY2019 allotment funds (%)	Allotment	Phase I	Phase II	Phase III
069	Funding	3.3%	At-Risk Students/ Alternative Schools	Adjust this allotment for low-income student concentration	Adjust for geographic cost differences	
031	Funding	2.6%	Low-Wealth Allotment			Incorporate funding to support base spending levels
002	Funding	1.0%	Central Office Administration	Adjust this allotment for low-income student concentration		Account for local contribution to base funding
024	Funding	1.0%	Disadvantaged Students Support	Adjust this allotment for low-income student concentration		
034	Funding	0.9%	Academically and Gifted Students			Account for local contribution to base funding
054	Funding	0.9%	Limited English Proficient Students	Adjust this allotment for English learner concentration		
130	Funding	0.6%	Textbooks	Adjust this allotment for low-income student concentration	Adjust for geographic cost differences	Account for local contribution to base funding
019	Funding	0.5%	Small County Support Funding		Adjust for economies of scale	
061	Funding	0.5%	Classroom/ Instructional Material	Adjust this allotment for low-income student concentration	Adjust for geographic cost differences	Account for local contribution to base funding
012	Funding	0.3%	Driver Training		Adjust for geographic cost differences	Account for local contribution to base funding
014	Funding	0.2%	Career and Technical Education	Adjust this allotment for low-income student concentration	Adjust for economies of scale	Account for local contribution to base funding

References

- Duncombe, W. D., & Yinger, J. (2004). *How much more does a disadvantaged student cost?* Syracuse, NY: Center for Policy Research at Syracuse University. Retrieved from <https://surface.syr.edu/cgi/viewcontent.cgi?article=1102&context=cpr>
- Willis, J., Krausen, K., Berg-Jacobson, A., Taylor, L., Caparas, R., Lewis, R., & Jaquet, K. (2019). *A study of cost adequacy, distribution, and alignment of funding for North Carolina's K–12 public education system*. San Francisco, CA: WestEd.