

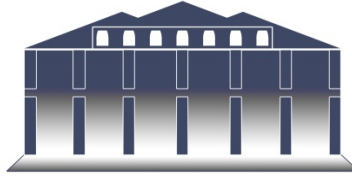
North Carolina Should Focus on Early Childhood Learning in Order to Raise Achievement in Predominantly Disadvantaged School Districts



**Final Report to the Joint Legislative
Program Evaluation Oversight Committee**

Report Number 2019-06

May 20, 2019



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May 20, 2019

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Representative Craig Horn, Co-Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly
Legislative Building
16 West Jones Street
Raleigh, NC 27601

Honorable Co-Chairs:

The 2018 Work Plan of the Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to identify at least 10 high-performing American school systems with predominantly economically disadvantaged students and compare the systems on several variables. In addition, the evaluation's charge directed the Program Evaluation Division to explore the reasons behind the better outcomes achieved by these systems and report on any common best practices applicable to North Carolina.

I am pleased to report that the Department of Public Instruction and the State Board of Education cooperated with us fully and were at all times courteous to our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "J. W. Turcotte", is written over a light blue horizontal line.

John W. Turcotte
Director



PROGRAM EVALUATION DIVISION

NORTH CAROLINA GENERAL ASSEMBLY

May 2019

Report No. 2019-06

North Carolina Should Focus on Early Childhood Learning in Order to Raise Achievement in Predominantly Disadvantaged School Districts

Summary

A student's economic background is a strong predictor of his or her academic performance. This study sought to identify characteristics of school districts that are predominantly economically disadvantaged and perform well academically. Using a national dataset of average test scores for school districts from 2009–2015, the Program Evaluation Division (PED) identified characteristics of predominantly disadvantaged districts that demonstrate average or better performance on standardized state tests; PED subsequently completed case studies of 12 such districts.

The gap in achievement between predominantly disadvantaged districts and more advantaged districts is already present by third grade. PED found that the small group of high-performing predominantly disadvantaged districts are already achieving these average or better test results in third grade. Thereafter, these districts maintain similar rates of student growth compared to other disadvantaged districts. Thus, the main pathway to higher performance for predominantly disadvantaged districts is by securing high student achievement in the early education years instead of focusing primarily on achieving above average academic growth after third grade.

PED found that high achieving predominantly disadvantaged districts share several characteristics including

- focusing on early education,
- increasing or maximizing student learning time,
- attracting, developing, and retaining high-quality teachers,
- using data and coaching to improve instruction,
- seeking additional outside resources, and
- promoting a local school board focus on policy and academic achievement.

In order to direct more attention to improving achievement in the early education years, the General Assembly should require districts that the State Board of Education identifies as low-performing to create an early childhood learning improvement plan as a component of their required plans for improvement. The General Assembly should also require an assessment of early childhood learning as part of the Department of Public Instruction's comprehensive needs assessment process for certain low-performing districts.

Purpose and Scope

The 2018 Work Plan of the Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to identify at least 10 high-performing American school systems with predominantly economically disadvantaged students and compare the systems on several variables. In addition, the evaluation's charge directed the Program Evaluation Division to explore the reasons behind the better outcomes achieved by these systems and report on any common best practices applicable to North Carolina.

This project addressed three research questions:

1. What are the characteristics of school districts that have high percentages of economically disadvantaged students yet demonstrate high academic performance?
2. What policies or practices are high-achieving disadvantaged districts implementing that may contribute to student performance?
3. What policies or practices could North Carolina implement in order to improve performance in districts with high percentages of economically disadvantaged students?

The Program Evaluation Division collected and analyzed data from several sources including

- the Stanford Education Data Archive, which includes national data at the school district level for the years 2009–2015;¹
- interviews with 12 school districts, both inside and outside of North Carolina, that have high concentrations of economically disadvantaged students and perform well academically;
- interviews with officials from the Department of Public Instruction;
- subject matter experts in the fields of school and district turnaround principal preparation; and
- academic and empirical literature related to challenges economically disadvantaged students experience, school district improvement and turnaround efforts, and evidence-based programs and interventions that improve student outcomes.

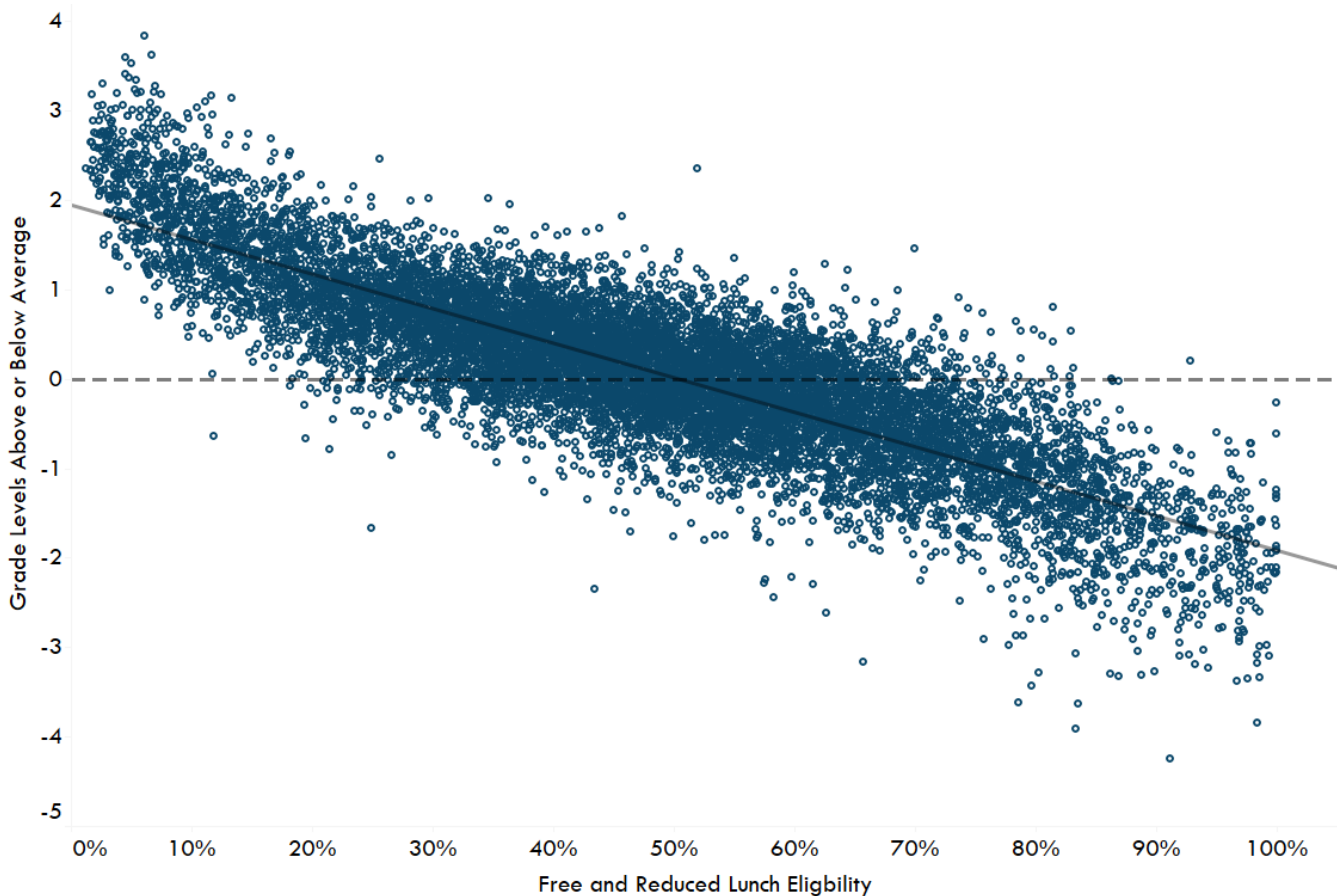
Rather than looking at individual disadvantaged students or schools, this project focuses at the school district level and at actions taken to improve student achievement throughout an entire district.

¹ Reardon, S. F., Ho, A. D., Shear, B. R., Fahle, E. M., Kalogrides, D., & DiSalvo, R. (2018). Stanford Education Data Archive (Version 2.1). Retrieved from <http://purl.stanford.edu/db586ns4974>.

Background

A student's economic background is a strong predictor of academic performance. This relationship exists not only at the individual student level but also at the school and district level. Exhibit 1 shows the relationship between achievement in school districts and the level of economic disadvantage. The exhibit measures achievement as the amount that average test scores fall above or below grade level within a given school district and measures disadvantage according to the percentage of a district's students who are eligible for the free and reduced lunch program. The graph demonstrates that as the concentration of poverty increases in districts, student academic performance tends to decline.

Exhibit 1: Average Test Scores in the Poorest School Districts Are Several Grade Levels Below Those in the Most Advantaged School Districts



Source: Program Evaluation Division based upon Stanford Education Data Archive (Version 2.1), 2009-2015 data.

Economically disadvantaged students experience a multitude of challenges that can negatively influence academic performance. Children from low-income backgrounds are more likely to have low birthweights and experience various health issues that can influence cognitive outcomes. In addition, impoverished early childhood environments are often less language-rich, and affected children access fewer activities outside the home such as after-school and summer programming. Similarly, a lack of funds can diminish a family's ability to purchase additional goods or services that could enhance student learning.

and growth. Research suggests poverty influences both parents and children individually as well as the parent-child relationship. Children also experience negative mental and behavioral outcomes due to environmental stress and awareness associated with poverty. Exhibit 2 shows some of the different types of factors that can affect a disadvantaged student's achievement.

Exhibit 2: Student Achievement Is Influenced by Family, Community, and School Factors



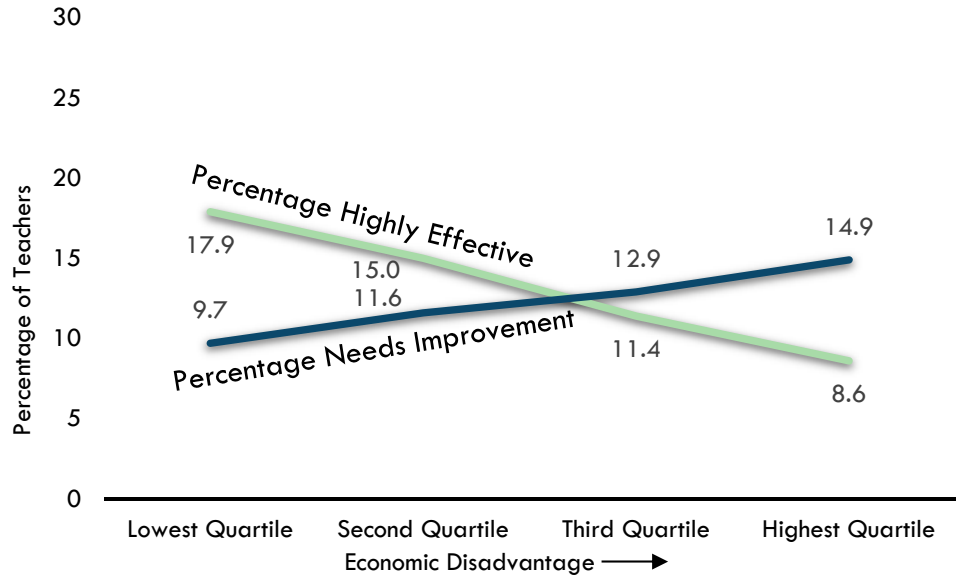
Source: Program Evaluation Division based on education literature.

Economically disadvantaged children are less likely to have stable housing arrangements, resulting in students moving in and out of schools, which can be disruptive for both the student and the school. Students who frequently move often experience a discontinuation in curriculum that interrupts learning. Homelessness or high residential mobility is a specific subset of economic disadvantage for students marked by an economic crisis that leaves students without a permanent home. These students may stay with extended family members, with friends, or in shelters. Lacking the basic need of permanent shelter, homeless or high-residential-mobility students experience mental and emotional stress as well as disruptions in peer and family relationships.

Economically disadvantaged students tend to face increased challenges stemming from their home or community environments and also face heightened challenges at school. Disadvantaged students more frequently encounter lowered expectations and negative messages about their ability to achieve compared to their higher-income peers. Moreover, teachers working in schools with high concentrations of disadvantaged schools often score lower on teacher evaluations and student growth measures. Exhibit 3 shows that schools in North Carolina with higher concentrations of disadvantaged students have fewer teachers receiving “Highly Effective” ratings and more teachers receiving “Needs Improvement” ratings using North Carolina educator effectiveness guidelines.

Exhibit 3

North Carolina Schools with Higher Concentrations of Disadvantaged Students Have Fewer Teachers Rated as Highly Effective

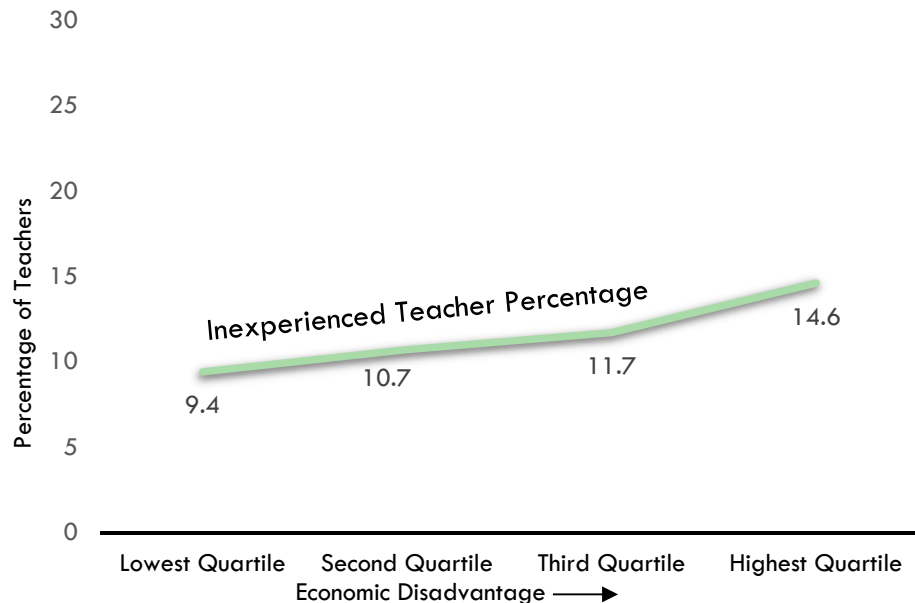


Source: Department of Public Instruction, *Final State Plan for the Every Student Succeeds Act*, (May 29, 2018) based upon teachers' observational data (2016–17 school year) combined with three-year average teacher student-growth data (2014–15 through 2016–17).

Exhibit 4 shows that disadvantaged schools in North Carolina also tend to employ less experienced teachers compared to more advantaged schools. Given the important relationship between teacher quality and student achievement, staffing disadvantaged schools with less experienced teachers is a problem.

Exhibit 4

North Carolina Schools with Higher Concentrations of Disadvantaged Students Have More Inexperienced Teachers



Note: The North Carolina State Board of Education defines an inexperienced teacher as one who has fewer than three years of teaching experience.

Source: Department of Public Instruction, *Final State Plan for the Every Student Succeeds Act* (May 29, 2018).

In summary, there is a strong relationship between poverty and academic performance. A number of causes and factors contribute to this relationship, arising from a student's home, community, and school environments. Identifying ways to improve the performance of economically disadvantaged students is a major challenge facing policymakers and practitioners in education today.

Methods

The Program Evaluation Division (PED) used a large national dataset of school district achievement to examine the characteristics of school districts that are predominantly disadvantaged and perform well academically. In addition to examining national-level trends in the data, PED further used the dataset to identify case study districts. PED then conducted in-depth interviews with superintendents and other central office staff to identify potential factors responsible for the success of these districts.

A national dataset with seven years (2008–2009 through 2014–2015) of data enabled PED to identify districts with high levels of both economic disadvantage and academic performance. The Stanford Education Data Archive (SEDA) is a publicly available dataset containing information about educational conditions, contexts, and outcomes in school districts throughout the country.² The SEDA dataset is unique in that it provides district-level average test score data on a common scale. States use different standardized tests and have different definitions of proficiency, making comparisons across states difficult. By applying a number of sophisticated statistical techniques, SEDA researchers were able to place disparate state testing data onto a common scale.³ The dataset is based on roughly 300 million test scores and contains standardized means for every school district for grades 3–8 in mathematics and English/Language Arts.

The SEDA dataset defines school districts geographically, so charter school data is included within the geographic school district to which it belongs regardless of whether it is administratively part of the given school district or not. The SEDA dataset contains numerous variables related to the demographics of school districts and characteristics of the districts themselves, such as free and reduced lunch eligibility, district size, teacher to student ratios, and measures related to socioeconomic status. This data comes primarily from two sources: 2006–2010 Education Demographic and Geographic Estimates and the Common Core of Data.

The Program Evaluation Division used two measures—percentage of students eligible for free and reduced lunch and socioeconomic status—to identify school districts with predominantly economically disadvantaged student populations. Education literature does not prescribe a single measure or definition of disadvantage. A common proxy that researchers use for economic disadvantage is eligibility for

² Sean F. Reardon, Andrew D. Ho., Benjamin R. Shear, Erin M. Fahle, Demetra Kalogrides, & Richard DiSalvo. (2018). Stanford Education Data Archive (Version 2.1). <http://purl.stanford.edu/db586ns4974>.

³ See Reardon, Kalogrides, & Ho (2017) for technical details. <https://cepa.stanford.edu/sites/default/files/wp16-09-v201706.pdf>.

free and reduced-price lunch. This measure has some critics owing to its imprecision; students are eligible for reduced lunch at 185% of the federally designated poverty threshold for a comparably-sized family. Still, many states use this measure in education funding formulas and in reporting on the performance of economically disadvantaged students under the Every Student Succeeds Act.

Another way researchers examine disadvantage is by looking at socio-economic status (SES), which measures a broader spectrum of family characteristics. Although a singular definition does not exist, scholars generally contend that a student's socioeconomic status depends on his or her parent's income, education, and occupation/employment. The SEDA dataset includes a composite measure of SES for each geographic school district in the study, determined by factoring several standardized measures including

- median income,
- percentage of adults ages 25 and older with a bachelor's degree or higher,
- poverty rate for households with children ages 5-17,
- Supplemental Nutrition Assistance Program receipt rate,
- single mother household rate, and
- employment rate for adults ages 25-64.

PED used both free and reduced lunch percentage and SES in order to try to ensure that districts selected for case studies are *predominantly* disadvantaged rather than identified as disadvantaged based on a single measure. For this project, PED defined predominantly disadvantaged districts as those ranked in the top quartile of free and reduced lunch eligibility nationally and in the bottom quartile for socio-economic status.

PED's application of the two criteria identified roughly 18% of all school districts nationwide as predominantly disadvantaged. After defining and identifying predominantly disadvantaged districts, PED selected school districts for case studies based upon

- average or better academic achievement as measured through average test score performance in math and English/Language Arts from 2009–2015;
- grade size within the district being greater than or equal to 100 students in order to select districts similar in size to most North Carolina districts;
- relatively high student growth rates; and
- willingness to participate in the study.

The case study portion of this research contains limitations because it explores factors for performance that districts self-report. In addition, the small number of districts (12 in total) limits the study's ability to generate causal conclusions. However, the case studies can help develop areas for study and provide a portrait of the characteristics and actions of some predominantly disadvantaged districts that are succeeding.

The Program Evaluation Division would like to thank the following districts for participating in this study:

In North Carolina:

- Alleghany County School District
- Hickory Public Schools
- Jones County Public Schools⁴
- Wilkes County Schools
- Whiteville City Schools

Outside North Carolina:

- Casey County School District, Kentucky
- Durant Independent School District, Oklahoma
- Fayette County School Corporation, Indiana
- Henderson County School District, Tennessee
- Johnson County Schools, Kentucky
- Steubenville City Schools, Ohio
- Whitley County School District, Kentucky

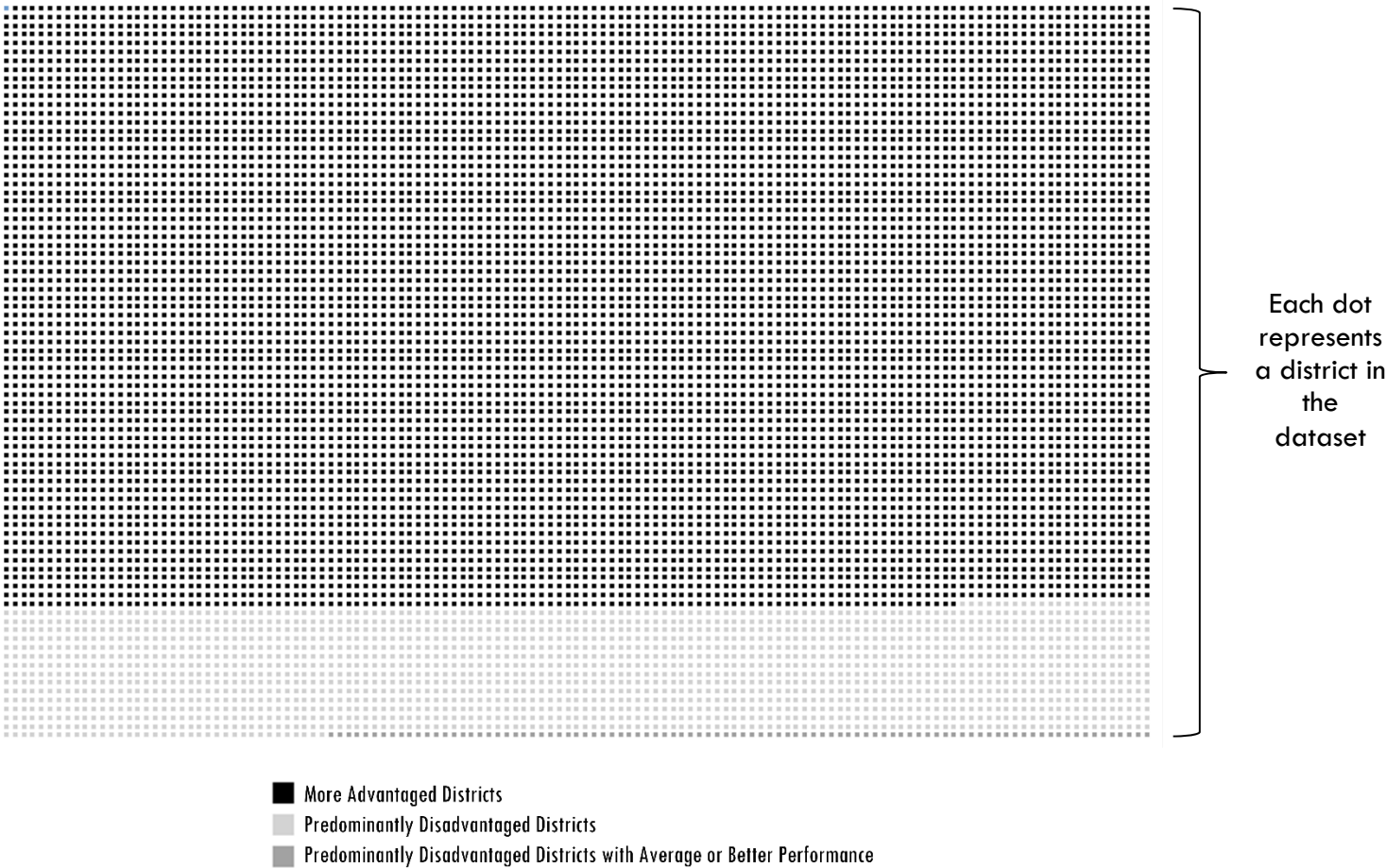
⁴ Jones County Public Schools did not qualify for inclusion based upon test score performance data from 2009–15. However, Jones County demonstrated improvement in achievement during that period. More recent state accountability data show that all Jones County schools met or exceeded growth in 2016–17 and received grades of B or C. Jones County had the highest 4-year cohort graduation rate in the state of North Carolina in 2016–17 and 2017–18. For these reasons, PED included Jones County in this study.

Findings

Finding 1. Economically disadvantaged districts that demonstrate average or better performance are uncommon.

Only 5% of predominantly disadvantaged districts identified for this study performed at grade level or better over a seven-year period. Within that 5%, only four predominantly disadvantaged districts performed above the 75th percentile. Conversely, 60% of districts not identified as predominantly disadvantaged performed at grade level or better. Exhibit 5 shows how few districts nationally were both disadvantaged and performed at grade level or better. These districts appear at the bottom of Exhibit 5.

Exhibit 5: Few School Districts in the Country Are Predominantly Economically Disadvantaged and Perform Well



Source: Program Evaluation Division based upon SEDA dataset (version 2.1), 2009-2015. See the methods section for the operational definition of predominantly disadvantaged districts.

Exhibit 6 shows the same school districts, but plotted based on average achievement and economic disadvantage as measured solely by free and reduced price lunch eligibility. The darker shaded circles represent districts identified as predominantly disadvantaged. The rectangle shows the 5%, or 94 out of 1,988 predominantly economically disadvantaged schools, that performed at grade level or better. The exhibit demonstrates that the number of “high” performers among disadvantaged districts is small.

Exhibit 6: Few School Districts in the Country Are Predominantly Disadvantaged and Perform Above Average Academically



■ Predominantly Disadvantaged Districts
 ■ Not Predominantly Disadvantaged

Source: Program Evaluation Division based upon SEDA dataset (version 2.1), 2009-2015.

Focusing on North Carolina, 45 of the 115 districts in the state fall into the category of predominantly economically disadvantaged as defined by this study. That number represents 39% of the state's districts, which is considerably higher than the national average of 18%. Of the 45 economically disadvantaged districts in North Carolina, only 7 (16%) performed at grade level. This percentage is actually higher than the national rate for such districts of 5%. However, whether looking at the state level or the national level, the number of districts with a predominantly economically disadvantaged student body that perform at

grade level or above is still small. Exhibit 7 summarizes the statistics discussed in the preceding paragraphs.

Exhibit 7

Percentage of Economically Disadvantaged Districts that Perform at Grade Level or Above is Small Nationally and in North Carolina

Breakdown of Predominantly Disadvantaged District Academic Performance		
	National	North Carolina
Total Districts in Dataset	11,054	115
Total Predominantly Disadvantaged Districts	1,988	45
Percentage of Districts that are Disadvantaged	18%	39%
Total Disadvantaged Districts Performing at Grade Level or Better	94	7
Percentage of Disadvantaged Districts Performing at Grade Level or Better	5%	16%

Note: There are roughly 13,500 school districts nationally, but the Program Evaluation Division's sample included only the 11,054 districts for which there was complete achievement and socioeconomic data.

Source: Program Evaluation Division based on data from Sean F. Reardon, Andrew D. Ho., Benjamin R. Shear, Erin M. Fahle, Demetra Kalogrides, & Richard DiSalvo. (2018). Stanford Education Data Archive (Version 2.1). <http://purl.stanford.edu/db586ns4974>.

As discussed in the Background, socioeconomic status and poverty correlate strongly with academic performance. For example, of the eight districts designated as low-performing districts in North Carolina in 2017–18, all eight meet the criteria for being predominantly disadvantaged. Although some districts overcome the economic challenges present in their communities to achieve at an average or better level, most do not. Findings 3 and 4 discuss ways that these predominantly disadvantaged districts reach a higher level of achievement.

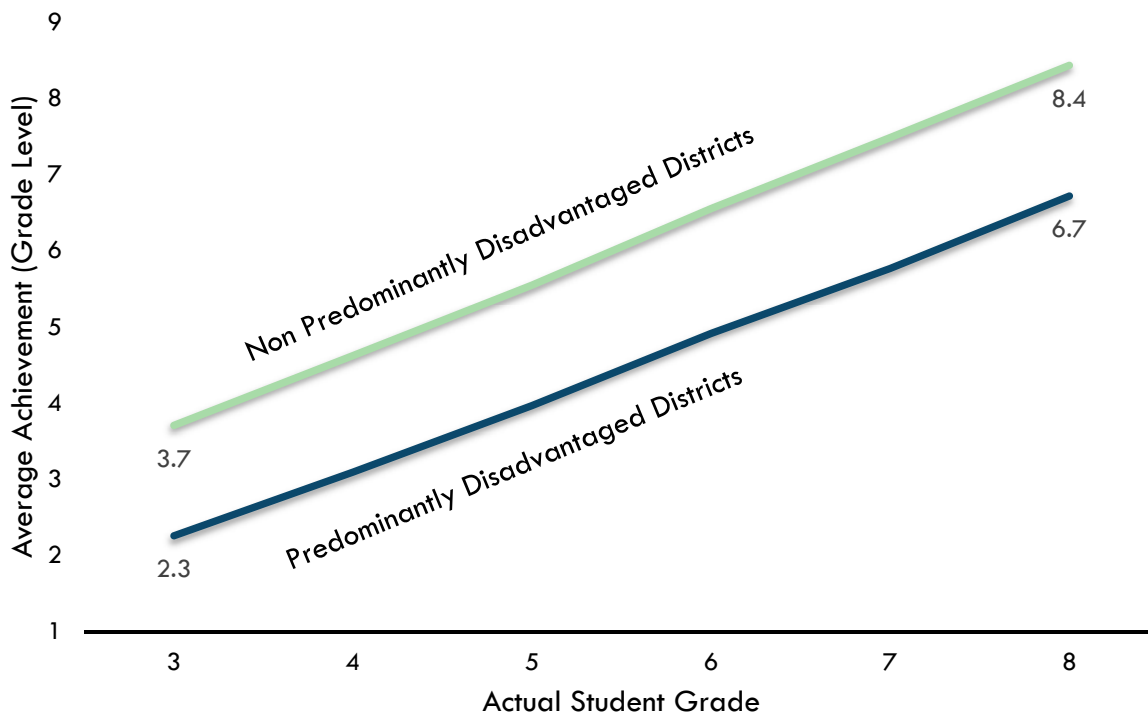
Finding 2. Predominantly disadvantaged districts with average or above performance are already demonstrating high achievement in third grade.

Third grade represents an important developmental milestone because it generally marks the end of what education experts define as the early education years, the period between birth and age eight. One common maxim that illustrates this transition holds that in grades K-3 students learn to read, but by fourth grade students shift to reading to learn. The reading skills a student possesses at the end of third grade can predict whether that student will graduate from high school with reasonable accuracy. Meanwhile, a gap in readiness in third grade can lead to a cascading effect, wherein students fail to master one skill and then cannot move on to master the next skill, which is dependent upon having learned the previous skill.

A distinct gap already exists between predominantly disadvantaged and more advantaged districts in third grade, but this gap does not

widen significantly between third and eighth grade. As Exhibit 8 shows, predominantly disadvantaged districts tested 1.4 grade levels behind more advantaged districts in third grade. The gap increases only slightly to 1.7 grade levels by eighth grade, meaning most of the gap is already present at third grade. Because third grade is the first year for which data is available in the SEDA dataset, performance in third grade represents a cumulative measure of all educational opportunity prior to and including this grade level. The gap witnessed in third grade highlights the importance of early education in efforts to improve the performance of predominantly disadvantaged districts.

Exhibit 8: Most of the Gap in Achievement Between Predominantly Disadvantaged Districts and More Advantaged Districts is Already Present in Third Grade



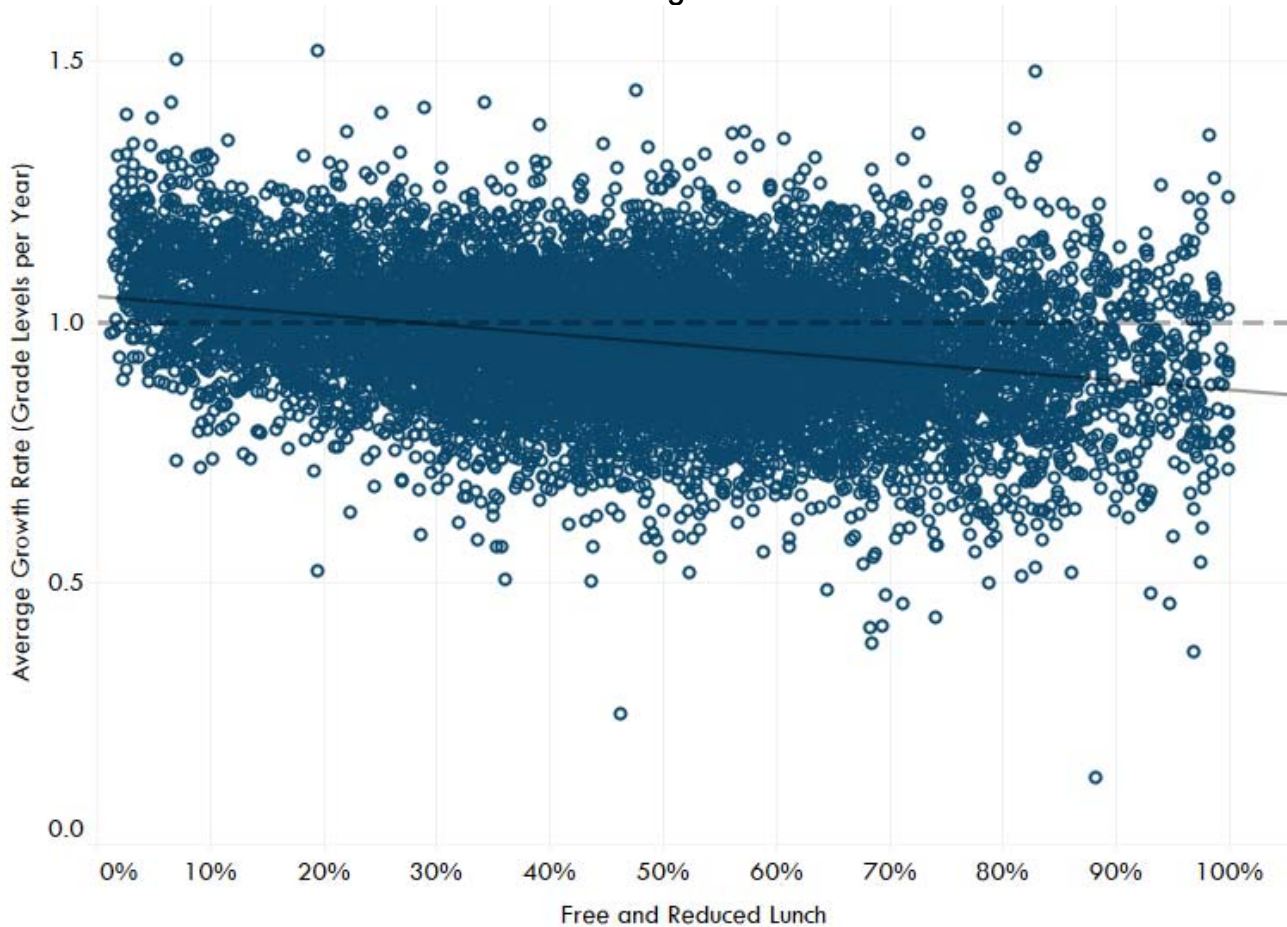
Source: Program Evaluation Division based upon Stanford Education Data Archive (Version 2.1), 2009-2015.

Thus far, this report has focused primarily on academic achievement, which measures how students perform at a specific point in time. Another important educational measure is growth, which considers how much progress students make over a given time period. The SEDA dataset measures growth on a grade level scale. A school district has a growth score of 1 if its average learning rate from third to eighth grade is equivalent to that of the average student in the U.S. Similarly, a district having a growth score of 0.6 would indicate the district's average learning rate was 40% slower per year than the average student's learning rate from third to eighth grade.

Exhibit 9 shows that average growth rates cluster near the average student growth of one grade level per year and only weakly correlate to the level of economic disadvantage in a school district. This weak correlation provides further evidence that much of the difference in

achievement between disadvantaged districts and more advantaged districts owes to disadvantaged students being behind by third grade and is less the result of a lack of growth from third through eighth grade.

Exhibit 9: Unlike Achievement Scores, District Grade Level Growth Rates Are Not Highly Correlated with Level of Economic Disadvantage

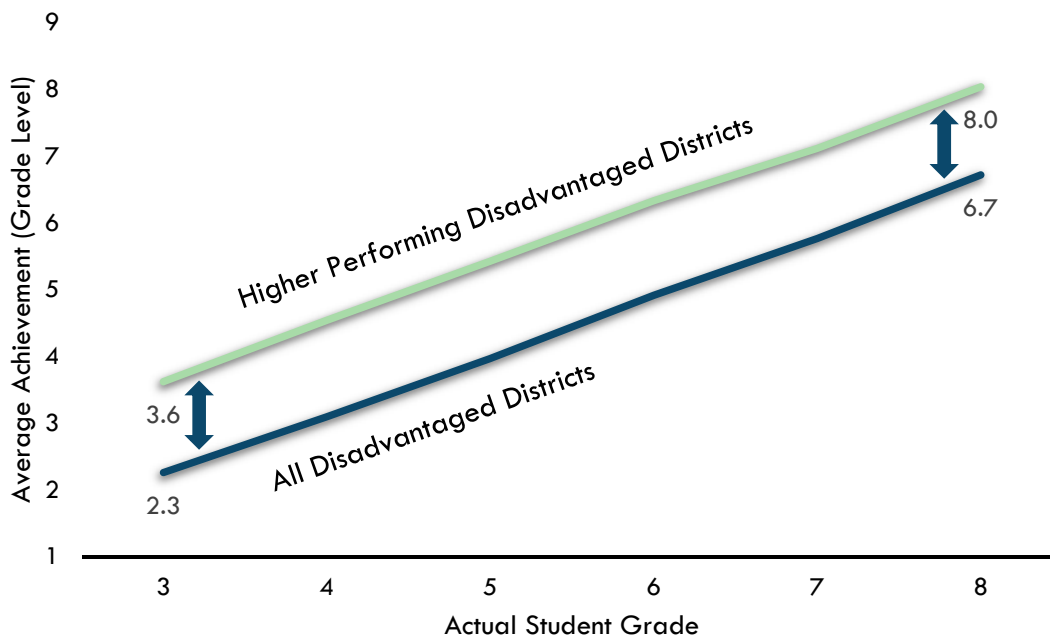


Source: Program Evaluation Division based upon Stanford Education Data Archive (Version 2.1), 2009-2015.

Individually, some predominantly disadvantaged districts may demonstrate low growth rates, but this problem is present in some advantaged districts as well. Many education researchers suggest that growth more accurately measures a school or district's effectiveness than overall achievement. However, standardized test tools typically measure achievement, and the results on these tests highly correlate with socioeconomic status rather than the degree of learning occurring in a district as measured by growth. When assessing a district's performance by looking solely at achievement on standardized tests, districts with wealthier students will generally score better, even if disadvantaged students are experiencing growth at the same or at a faster rate than their wealthier peers. Without considering growth alongside achievement, the performance of districts whose students are largely already testing below average in third grade can appear low even if those schools or districts are achieving large gains in learning.

Higher-performing predominantly disadvantaged districts separate themselves from other disadvantaged districts by already demonstrating high achievement in third grade. After third grade, the higher-performing predominantly disadvantaged districts grow at roughly the same rate as all predominantly disadvantaged districts. Exhibit 10 shows that these districts perform much better on third grade achievement tests than the average highly disadvantaged district. Therefore, in aggregate, the above average achievement of these districts is due not to high rates of growth experienced between third and eighth grade. In fact, the growth rates between the higher-performing subgroup and the larger group of all predominantly disadvantaged districts are nearly the same. On average, both groups grew at roughly 0.91 grade levels per year from third to eighth grade.

Exhibit 10: Higher-Performing Disadvantaged Districts Succeed by Starting at a High Level, Not by Growing More Rapidly from Grades 3-8

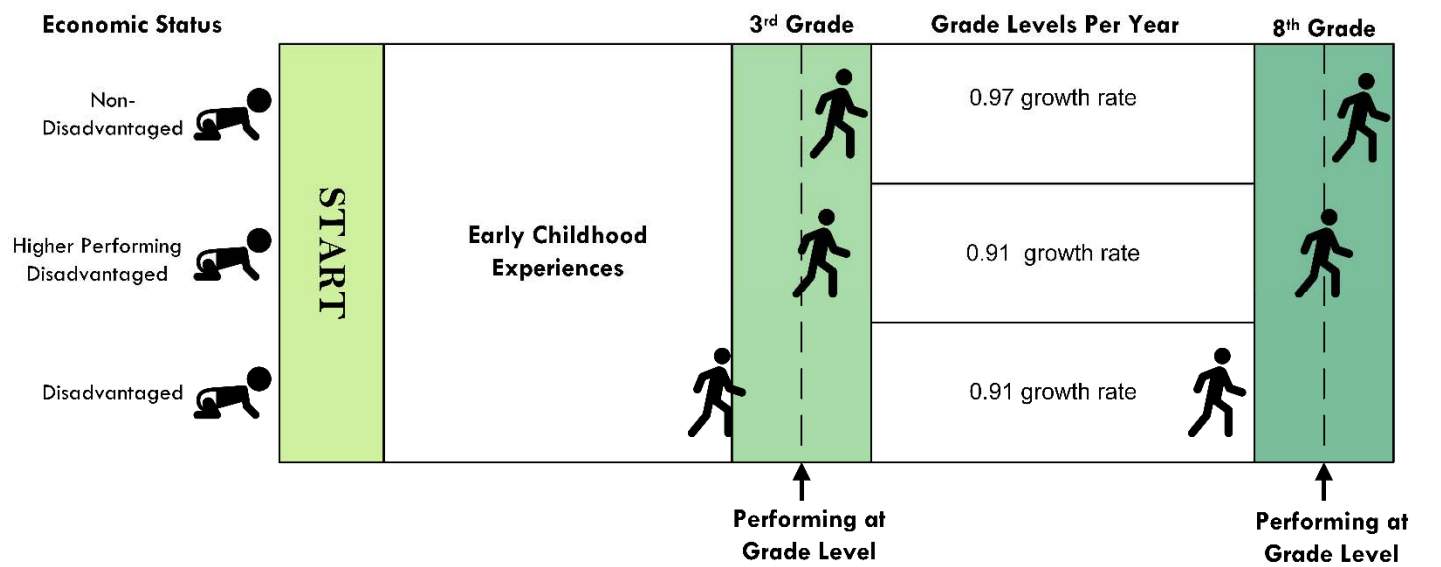


Source: Program Evaluation Division based upon Stanford Education Data Archive (Version 2.1), 2009-2015.

This observation about the importance of achievement by the end of third grade is not meant to suggest that what happens from third to eighth grade and afterwards is unimportant. Gains achieved by third grade can be lost in succeeding years, a process often described as “fade-out.” However, because gains in achievement take place through a cumulative process wherein mastery of skills or concepts continue to build upon one another, it is much more difficult for school districts to reach a high achievement level in later grades if school districts are performing poorly in earlier grades. For a district in which third graders perform one grade level below average, a growth rate of 1.2 grade levels per year would be required in order for the district to be achieving at grade level by eighth grade. Exhibit 11 provides a visualization of the average growth trajectories of three different types of districts. The exhibit shows that

growth rates do not vary nearly as much as the level at which districts are performing in third grade, and therefore what happens up through third grade is much more determinative of how a district performs in eighth grade than what happens in the intervening years from third through eighth grade.

Exhibit 11: What Happens in Early Childhood Largely Explains Where a School District Is in Eighth Grade



Source: Program Evaluation Division based upon analysis of Stanford Education Data Archive (Version 2.1), 2009-2015.

Even though third grade is an important inflection point, the best time to address low achievement among disadvantaged districts likely begins much earlier. The dataset used for this report is limited in the sense that national, comparative data is only available starting in third grade. When researchers have looked at achievement gaps among disadvantaged students and their more advantaged peers, they have found that gaps are already present relatively early in life. Children from low-income families begin school with lower readiness skills and lower achievement scores than their higher-income peers. Other research has shown that students’ scores on first grade reading assessments are highly correlated with reading and math scores throughout their academic careers. These findings suggest that gaps between disadvantaged and more advantaged students exist early in life, and therefore an effort to improve third grade achievement among predominantly disadvantaged school districts likely requires creating a quality education experience throughout the early childhood period.

In summary, predominantly disadvantaged districts that perform well are already demonstrating above average achievement on tests at the end of third grade. This higher level of achievement likely stems from educational experiences occurring during the early childhood years, defined by education researchers as the period from birth to third grade. At the same time, disadvantaged districts that are already performing below grade level in third grade find it very challenging to make up that gap through growth between third and eighth grade.

Finding 3. Economically disadvantaged districts that perform well share common characteristics.

The Program Evaluation Division (PED) conducted interviews with 12 school districts with high concentrations of disadvantaged students that demonstrate average or better performance. As described in the Methods section, these case study districts contained high concentrations of economically disadvantaged students and performed average or better on standardized math and English/Language Arts tests from 2009–2015. Exhibit 12 provides more detail on the demographics of these districts. Additional data on the characteristics of these districts is available in the appendix.

Exhibit 12: Demographic Characteristics of the 12 Districts Selected for the Study

District Location	Student Membership	Free & Reduced Lunch (%)	District Spending per Student	County Median Income
Alleghany County, NC	1,420	72%	\$11,246	\$38,944
Casey County, KY	2,338	70%	10,209	\$33,031
Durant, OK	3,718	67%	8,193	\$35,575
Fayette County, IN	3,618	65%	11,407	\$41,476
Henderson County, TN	4,040	64%	8,043	\$42,711
Hickory City, NC	4,305	63%	9,113	\$44,336
Johnson County, KY	3,584	68%	10,137	\$35,629
Jones County, NC	1,182	83%	12,296	\$37,256
Steubenville City, OH	2,385	69%	10,375	\$34,769
Whiteville City, NC	2,289	65%	8,749	\$28,671
Whitley County, KY	4,462	79%	11,003	\$34,103
Wilkes County, NC	9,911	69%	8,699	\$37,173
National Average	3,533	47%	\$12,682	\$57,652

Source: Program Evaluation Division based upon Stanford Education Data Archive (Version 2.1), 2009–2015 data. District membership is based upon 2017 NCES data and county income is based upon US Census Bureau QuickFacts 2018 estimates.

PED identified several factors in common that districts pursued in an effort to improve student outcomes. However, each district used a unique combination of efforts to achieve its outcomes. Common factors identified across districts include

- focusing on early education,
- increasing or maximizing student learning time,
- attracting, developing, and retaining high-quality teachers,
- using data and coaching to improve instruction,
- seeking additional outside resources, and
- promoting a local school board focus on policy and academic achievement.

Successful districts prioritize early education. As discussed in Finding 2, early childhood outcomes are a strong predictor of later educational

outcomes. Common efforts to improve early education include ensuring children attend high-quality Pre-K programs and supporting student transitions to kindergarten.

“Our preschool program is really good. We open it up to basically any kid. As superintendent, that’s financially tough. We have 19 classrooms of preschool and get very little state funding. We only get about \$300,000 for preschool from the state and it costs us \$1.1 million to run. It’s a huge financial challenge. But, you know how kids [who are disadvantaged] tend to be behind—our preschool levels the field for us.”

—District Superintendent

- **High-Quality Pre-Kindergarten Programs.** Pre-K programs strive to improve school readiness, placing children on a trajectory of higher academic achievement. These programs vary in scale, features, quality, and student participant characteristics. Research indicates that economically disadvantaged students benefit more from Pre-K than their more advantaged peers, making it especially relevant in predominantly disadvantaged districts.

All 12 districts discussed in this section provide Pre-K, primarily to four year-olds. Some districts devote significant resources to Pre-K. Durant Independent School District in Oklahoma made a large investment in Pre-K by converting a school into an early childhood learning center for three- and four year-olds. The Pre-K program for Steubenville City Schools in Ohio also serves three- and four year-olds at elementary schools and uses a curriculum, Curiosity Corner, which aligns with state and national early-learning standards as well as the Success for All program that Steubenville uses through middle school. Meanwhile, Whitley County Schools in Kentucky works with community partners to target children even before Pre-K with home-based programs that involve reading to children, playing literacy games, and other supports.

In 2017, four of the five North Carolina counties in which case study districts are located had an estimated 75% or more of their eligible populations participating in NC Pre-K. Children are eligible to participate in NC Pre-K if their family’s gross income is at or below 75% of the State Median Income.⁵ The rates of participation in NC Pre-K by these four case study districts are all among the top quartile in the state.

- **Transition to kindergarten.** Kindergarten transition is a time of changing demands, which presents risks for children and their families if they are unable to adapt to the new educational environment. Transition practices include children visiting their kindergarten classrooms before the start of the school year, families sharing information about their children with kindergarten teachers, and preschool teachers sharing child development information with kindergarten teachers. Pre-K students in Johnson County Schools in Kentucky ride the same buses as older students and the district pairs an older child with a Pre-K student to help younger children feel safe and familiar with their surroundings, which aids in their transition while also teaching the older student about empathy and responsibility. One study linked an increasing

⁵ Eligibility is not limited to children whose families meet the 75% State Median Income requirement. Certain children of members of the Armed Forces may qualify without regard to income. Up to 20% of age-eligible children enrolled may have family incomes in excess of the 75% State Median Income threshold if they possess other designated risk factors.

number of kindergarten transition activities with positive outcomes, especially for disadvantaged students.

Although approaches vary, the case study districts all valued early education and pursued efforts to support and expand it.

“We maximize our time during the day as much as we can. We do flex grouping and have an after school program. Social media is not helping the young people of today. But we [try to counter the effects of social media by having] an after school learning program focused on adults helping students with homework.”

—District Superintendent

Successful districts increase or maximize student learning time. The case study districts found ways to maximize existing instructional time or add additional time to the school day or year. Most of the districts use increased learning time as a strategy to address specific learning gaps.

For example, Whiteville City Schools in North Carolina has a program called “WIN,” which stands for What I Need. Students struggling in a particular concept or subject area receive 45 minutes of uninterrupted instruction time every day with a teacher trained in the needed area. Similarly, Alleghany County Schools in North Carolina give students who are struggling with reading an extra hour to practice during the school day. Durant County Schools in Oklahoma provides reading specialists who go into lower grades and work with students who are behind for 25-30 additional minutes per day. Finally, both Jones County Public Schools in North Carolina and Fayette County School Corporation in Indiana spoke of maximizing time within the existing day and protecting instructional time.

Many districts also extend instructional time beyond school hours. These expanded services often rely upon extra or repurposed resources as well as grants. Whiteville City Schools uses Title I funds and a 21st Century Community Learning Centers grant to provide extra instructional aid to students. Similarly, Johnson County Schools in Kentucky uses 21st Century Community Learning Centers funds to provide before- and after-school enrichment programs to tutor students. Henderson County Schools in Tennessee uses mini-contracts to pay teachers to provide additional instruction before or after school in subjects in which students are struggling. Hickory City Schools in North Carolina provides an after-school tutoring program through partnerships with local churches and grant funding. Finally, Durant County Schools in Oklahoma offers a summer school program that is administered and funded by the Choctaw Nation but is available for all students in the district.

Although districts in our sample cited increased learning time as a common strategy, there is still some uncertainty in education research as to whether increased learning time programs are always successful. A meta-analysis of increased learning time found mixed effects on student academic outcomes, suggesting that outcomes depend on the settings, implementation features and fidelity, and characteristics of the students targeted.⁶ However, despite finding mixed effects overall, researchers found large positive effects of increased learning time among students struggling to meet grade-level standards in English/Language Arts.

⁶ Kidron, Yael & Lindsay, James J. (2014). The effects of increased learning time on student academic and nonacademic outcomes: Findings from a meta-analytic review. American Institutes for Research.

Successful districts seek additional resources to support their success. In addition to seeking resources to extend and maximize instructional time, successful districts pursue assistance from various sources to support students in all phases and facets of their educational experience. Superintendents discussed applying for grants, such as North Carolina Golden Leaf grants, to obtain laptops for students. The superintendent at Hickory City Schools discussed applying for and receiving a grant from the State to bring in technology experts to schools to help teachers with technology integration. The same superintendent discussed reaching out to Rotary clubs, churches, and civic groups in order to develop partnerships that have yielded various resources and volunteers. Districts that receive 21st Century Community Learning Centers grants provide before- and after-school programming beyond tutoring for activities like music, pottery, martial arts, yoga, and meal preparation. Overall, districts described seeking various government or private-sponsored support to extend their capacities during and outside of school hours.

Successful districts attract, develop, and retain high-quality teachers. A large body of research suggests teachers are the most influential school-level factor related to student achievement, particularly for low-income students, who tend to receive an even greater preponderance of their education from school compared to their more advantaged peers. Research also suggests that teacher turnover negatively influences student academic outcomes as it interrupts instruction and results in more novice teachers in the classroom, which occurs more frequently in disadvantaged districts. Furthermore, continual turnover is financially expensive for districts, estimated at a cost of roughly \$8,000 per teacher replacement.

Recent research indicates school working environments strongly drive teacher turnover. A lack of administrative support, collegial relationships, and a strong school culture are larger factors in causing teachers to leave than the demographics of their students. Therefore, in order to achieve a stable, high-quality teacher workforce, several workplace-based factors must be present:

- **Administrative Support.** School districts contain several organizational layers including teachers, principals, and superintendents. Allowing each layer of leadership to lead within its sphere is a cornerstone of administrative support. Within individual schools, and particularly in high-poverty schools, principals play a sizeable role in the job satisfaction and retention of teachers.

Principals establish workplace conditions through personnel decisions such as assigning teachers to given subject areas and grade levels, establishing teacher workloads, creating formal structures of support like mentorships or collaborative communities, and providing staff with opportunities for development. They also cultivate relationships with parents and the community. As such, a strong principal must possess managerial, instructional, and interpersonal skills.

“So the board trusts the superintendent, then the superintendent turns around and trusts the principal. So there is a trust factor, and our culture is evident—being positive, looking for the good in people, and allowing them to do their work.”

—District Superintendent

Many of the superintendents interviewed by the Program Evaluation Division (PED) discussed the importance of hiring strong principals with in-depth instructional knowledge who would develop positive relationships with their staffs. Several superintendents discussed the necessity of giving principals autonomy to do the business of running schools, which research echoes. As one superintendent stated, “I give autonomy to principals, it’s something I pride myself on. Hire the right people and let them lead.” Superintendents shared this sentiment about principals as well as teachers. This consideration also relates to another important work environment factor, collegial support.

- **Collegial Support.** In surveys of teacher preferences, teachers consistently identify having cooperative, competent colleagues and mentors as one of the most important factors that help them teach. An inclusive environment built on respect and trust helps foster cooperation among colleagues. PED spoke with several superintendents who emphasized the importance of relationships throughout the district. One superintendent described this value by saying, “It’s all about visibility and accessibility for us. I want people to feel comfortable reaching out to me if there’s issues and that’s from the cafeteria staff to school leadership.” Familiarity appears to breed trust in the form of regularly established formal meetings between various levels of staff, opportunities for instructional feedback and assessment, and informal interactions.

In addition, many districts discussed having new teacher onboarding programs or academies to help teachers learn the procedural, content-based, and practice-based knowledge present in their schools. Some districts even offer mentorship programs that match a more seasoned teacher with novice teachers. Research suggests mentoring programs help new teachers feel less isolated and lead to higher job satisfaction, which in turn improves student achievement. Other formal structures of collaboration include professional learning communities or other types of groups that meet regularly and review student data, develop instructional strategies, or pursue professional development. The State Board of Education in North Carolina prescribes standards for beginning teacher mentorship programs in policy and states all Local Education Agencies and charter schools must implement a three-year induction program.

- **Positive School Culture.** Culture defined broadly includes the patterns of shared basic assumptions, values, and behaviors in a given group in a given context. Similarly, school culture includes the prevailing norms and values expressed through individuals’ practices and behaviors in a school setting. A strong, positive school culture reinforces a sense of community and trust through collaborative interactions and developed relationships. When an enterprise, whether public or private, establishes a culture supportive of its workers and goals, its performance improves.

“I think we do a very good job of stressing to all staff that the socioeconomic background of our students will not define where they end up. It’s not a crutch to use. We do a great job of not lowering our expectations for our students based on the background where they come from. That’s the first step.”

—District Superintendent

In the context of schools, teacher retention is tied to positive school culture. A common assumption is that teacher turnover occurs because teachers prefer to work with higher-income students with fewer behavioral or social-emotional challenges, but research indicates that teachers more frequently tend to leave a school due to organizational conditions such as a lack of strong leadership or school-wide norms around discipline.

Research also suggests schools and districts with a strong, shared mission are more able to attract and retain teachers. Several of the districts PED interviewed discussed focusing on the efficacy of all children and helping instill that value as a goal for all staff members. Two related quotes from different superintendents illustrate this shared value:

- O “Working with teachers and putting them through some training...I think we’ve instilled in them the belief that all kids can learn and that they can be successful. I think that was the spark.”
- O “We focus on developing relationships and knowing our kids...We are a district that never lets the barriers not let us be successful. Our students are our students, the richest and poorest. That mindset is vital.”

Creating a culture around positive student efficacy produces results beyond teacher retention. Some research has demonstrated a link between teachers’ intentional or unintentional expectations and students’ success. When teachers perceive a low degree of impediments to student learning, student achievement is higher, even when students are disadvantaged. In addition, a strong work culture can attract teachers to a district.

Although the goal of developing a positive work environment in schools may seem more elusive than other factors, research suggests it is linked to improved student outcomes. In fact, all of the superintendents mentioned some aspect of developing a strong working environment.

Successful districts use data and coaching to improve instruction.

Research indicates that new teachers must work three to seven years to gain sufficient knowledge and skills to be considered highly qualified. As such, districts need to provide continual professional development opportunities for teachers of all levels, but particularly for novice teachers. Some school districts hire instructional coaches to observe teachers, provide feedback, and provide additional training related to teaching a given subject area or concept. Several of the case study districts placed instructional coaches in every school or in as many schools as possible. For example, the superintendent in Wilkes County noted the important contribution that having instructional coaches in each of the district’s schools for almost 10 years had made to its continued academic success.

Districts that mentioned making use of instructional coaching also discussed how and in what ways they used student data. Typically, districts collect data in either formative or summative assessments.

1. A formative assessment is a quick, frequent test to gauge a student's understanding of a certain concept or lesson (e.g., quiz after reading a passage). Formative assessments are part of the instructional process, providing ongoing feedback to teachers about student progress.
2. A summative assessment measures a student's cumulative knowledge in a given subject area at the end of a unit or time period (e.g., end-of-term exam).

Coaches or teacher groups (often structured as professional learning communities) review student data and adjust instruction accordingly. Superintendents discussed the importance of using formative assessments to adjust instruction and make sure students are learning given concepts. Sometimes data gathered from formative assessments is also used to shift students into programs or opportunities to receive extra learning or instructional time before or after school or to attend a concentrated study hour for students needing instruction in a given topic area.

Districts discussed at length their efforts to tie together data analysis and instructional adjustments including adopting formal approaches to collecting and analyzing data using various vendor-supplied assessment tools.⁷ Other districts develop their own assessment tools and analyze results in standing monthly meetings. Some schools adopt whole school reform models focused on daily data analysis and complete instructional alignment such as Success for All. The degree to which data collection, analysis, and subsequent instructional adjustments take place varies, but case study districts consistently place emphasis on teachers actively engaging in monitoring student progress and adjusting instruction as necessary, whether independently, with other teachers, or with instructional professionals.

"It doesn't matter where you're from or what zip code, we want you to succeed...The focus has to be on student achievement. Other districts across the state have board meetings where students or student achievement isn't mentioned."

—District Superintendent

Successful districts have local school boards that focus on policy and academic achievement and support their superintendent. Education literature describes several important characteristics of effective school boards including

- an overarching focus on students' academic achievement,
- a trusting and collaborative relationship with the superintendent, and
- attention to policy, not administration.

Literature describes effective boards as those that focus on holding the superintendent and his or her colleagues accountable for progress without engaging in the daily administration of schools.

A common critique of local school boards is that they tend to micromanage and spend far more time on administrative matters than policy development or oversight. Micromanagement can result from board members trying to direct or undo decisions of the superintendent regarding personnel and purchasing or from individual board members trying to intervene inappropriately on behalf of constituents. North Carolina education experts expressed concern in interviews about some

⁷ The most commonly used tools are NWEA MAP and TE21's CASE Benchmark Assessments.

school boards in North Carolina limiting the ability of their superintendents to lead district improvement by micromanaging district operations and sometimes even interfering in everyday personnel decisions better left to superintendents. There may be a strong temptation for school board members to intervene in hiring especially in communities where the school board is a large employer. In fact, in 64 of 100 counties in North Carolina, a local school board is the largest employer.

Superintendents of the case study districts discussed the importance of having autonomy to make personnel and management decisions. They also detailed their own positive, trusting relationships with their school boards. As one superintendent summarized the relationship:

“I have a wonderful board. They’re supportive of our programs, our teachers, staff members, and students. They’re student-oriented. They’re here for the right reasons. I don’t have anyone with an axe to grind or a golden child or program. They’re just here because they want to support the kids in the community. They very much let us do our job. They give us total autonomy in hiring/firing.”

Although commonalities exist among the 12 case study districts, they did not use identical strategies and approaches to achieve success.

Each of the superintendents in the case study districts emphasized certain areas of district management more than others. For example, one superintendent’s strategy to improve teacher quality focused on new teacher development, whereas another focused primarily on the hiring process. Another example of the differences in prioritization and emphasis is that some districts discussed aggressively pursuing outside grant funding for programs that target at-risk students or provide elementary student counseling, whereas others focused on utilizing resources within the community through civic partnerships.

In addition, districts used well over 10 different curricula and programs, and no single curriculum or program is commonly used across several districts. Despite this lack of commonality, some districts are strong believers in the programs they implement. For example, Steubenville City Schools in Ohio uses a whole school reform model throughout the district called Success for All. Steubenville City Schools pointed to the consistency of the program (used in Pre-K through middle school) as well as its longevity and the corresponding stability it has created as part of why the model has been effective. Other districts did not believe that the programs or curricula they use had as much to do with their success. One superintendent stated that they were “firm believers that people make differences, not programs.” Another superintendent stated, “Visitors will come and ask what math or reading program we use. That’s not to say we don’t use programs, but it’s not the thing we hang our hat on.”

Another contextual factor contributing to district success is that certain districts have access to resources that are unique to their particular community or geographic location. For example, Durant, Oklahoma is home to Southeastern Oklahoma State University. Durant Independent School District has benefitted from the university’s teacher education

program both because it provides a pipeline of teachers to hire and because college students in the education department spend time tutoring in Durant elementary schools. Likewise, Whitley County School District in Kentucky has benefited from its relationship with the University of the Cumberlands, which is located in Whitley County and sends student teachers to the district. Having this close relationship allows the district to identify promising student teachers and recruit them when it is hiring.

In summary, districts with high concentrations of disadvantaged students use various strategies to create environments in which students can be academically successful. Every district tailors its approach to its unique needs, but some commonalities, confirmed in academic research, emerged across the Program Evaluation Division's 12 case study districts. These factors include focusing on early education; seeking extra resources; creating a supportive work environment to attract, grow, and retain teachers; using data and instructional coaching to adjust instruction; and establishing clear roles for the local school board and superintendent.

Finding 4. In North Carolina, opportunities exist to improve achievement among predominantly disadvantaged districts through state funding and other forms of support.

Many of the practices implemented by predominantly disadvantaged districts that succeed are primarily the purview of local school districts. Local school boards set much of the policy governing their respective districts and are responsible for hiring the superintendent. In addition, superintendents, principals, and other leaders make decisions influencing the work and learning environments that support teachers and make them want to work in a district.

One of the primary levers available to the State to improve districts is through the support it provides, particularly to low-performing districts.

The North Carolina Department of Public Instruction (DPI) provides support to school districts across a number of areas such as K-3 literacy, digital learning, Exceptional Children programs, and federal programs. DPI launched a redesigned regional support structure in the spring of 2019, which follows the recommendation of a 2018 operational assessment of DPI conducted by Ernst & Young to create a more integrated and streamlined system of support to Local Education Agencies (LEAs). Each region now has a case manager who oversees its support team.

Regional teams are responsible for providing academic supports in the field through a tiered approach, whereby the intensity of support is greatest for low-performing districts, which have more intensive needs and could receive a range of different state or federal supports. One important targeted support for districts is a comprehensive needs assessment, which provides a systematic review of practices, processes, and systems within a district and assists district leadership in determining needs, setting priorities, and benchmarking performance.

The new regional support structure allows DPI to provide support across several divisions or offices with the intention of increasing coordination

across academic areas, deploying resources more efficiently by reducing duplication, and increasing the use of data to drive decision making. Although the redesigned structure holds promise, DPI also recently had to reduce the total number of positions focused on turning around low-performing schools and districts because of state budget reductions and the end of funding from the federal Race to the Top initiative. Time will be necessary to understand the full effect of these changes and evaluate the effectiveness of the new regional support structure.

Increased early education funding is another strategy the General Assembly could pursue to improve academic achievement in predominantly disadvantaged districts. Data from this study and others continues to point toward the importance of early childhood education in setting a higher trajectory of achievement for predominantly disadvantaged districts. North Carolina already makes several investments in the early childhood landscape, including NC Pre-K, Smart Start, kindergarten entry formative assessments (KEA) used to identify gaps in readiness, and early literacy programs in grades K-3.

As discussed in Finding 3, NC Pre-K primarily targets economically disadvantaged students, defined here as those with family incomes at or below 75% of the State Median Income. The North Carolina Department of Health and Human Services' Division of Child Development and Early Education contracts with 91 local agencies to provide Pre-K slots throughout the state. Each slot provides the capacity to serve one child for a full program year. In Fiscal Year 2018–19, the General Assembly increased funding for NC Pre-K to \$163.8 million and NC Pre-K contracted for 29,791 slots.⁸ The National Institute for Early Education Research at Rutgers University estimates that NC Pre-K presently serves 47% of eligible children, or 24% of all four year-olds in the state. In 2018, the General Assembly passed S.L. 2018-2, which further increased funding to NC Pre-K with a goal of enrolling an additional 3,000 children in 2019–21.

Studies by the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill have found that NC Pre-K has a positive influence on the development of children's language, literacy, and math skills and leads to higher third grade reading and math end-of-grade test scores. Researchers at Duke University also found participation in NC Pre-K results in positive student outcomes, including improved student math scores and reading scores, reduced probability of special education placement, and reduced probability of repeating grades. They found these effects to be consistent through the end of eighth grade with no "fade-out."

Recognizing the importance of early childhood education, the General Assembly created the B-3 Interagency Council in 2017, which is a joint council between the Department of Health and Human Services and DPI. The Council consists of 12 voting and 4 nonvoting members charged

⁸ According to a 2017 cost study of NC Pre-K slots completed by the Center for Urban Affairs and Community Services at North Carolina State University, the overall cost for a slot in the NC Pre-K program was \$9,126, with state funding covering approximately \$5,534 (61%).

with establishing a vision and accountability for a birth through grade three system of early education. The General Assembly also directed DPI to establish the position of Associate Superintendent of Early Education to serve as chief academic officer for early education. The B-3 Interagency Council submitted a progress report to several legislative committees on April 1, 2019 that contains nine recommendations addressing the areas of 1) transitions and continuity, 2) data-driven improvement and outcomes, and 3) teacher and administrator preparation and effectiveness. Several of the recommendations would require General Assembly action and additional appropriations. For example, the Council recommended the General Assembly amend state law to require LEAs to work with community Early Care and Education partners to develop a plan for transitioning all children into kindergarten. The Council also recommended the General Assembly appropriate additional funds to increase the NC Pre-K reimbursement rate to reflect the cost of hiring high-quality educators. In summary, the B-3 Council can be an important ongoing source of information and strategy for the General Assembly in determining how the State can improve its system of early education.

Recommendations

Recommendation 1. The General Assembly should require low-performing school districts to include an early childhood improvement plan as a component of their required plans for improvement.

Under N.C. Gen. Stat. §115C-105.39A, Local Education Agencies (LEAs) in which the majority of schools receive an overall school performance grade and growth score of “low-performing” are designated as low-performing districts. After receiving this designation, a district must create a plan to address how it will improve school growth and performance scores in each low-performing school. In addition, the plan must address how the superintendent and other administrators will work with each low-performing school and how district policy should be changed to improve student achievement throughout the district.

The majority of the gap between higher- and lower-achieving school districts exists by third grade. Education is a cumulative process and because poor performance in early years can have a negative cascading effect, low-performing districts should develop specific strategies aimed at boosting achievement from Pre-K to third grade. If low-performing districts hope to raise achievement, the data suggests that the greatest opportunity to do so is during the early years of student learning.

Early learning strategies can include

- expanding Pre-K program participation among disadvantaged students;
- improving Pre-K quality;
- ensuring alignment of Pre-K curricula with elementary school curricula;
- developing programs to help students transitioning to kindergarten;
- providing professional development focused on early learning; and
- providing instructional coaching focused on Pre-K through third grade.

Improving early education would not only help students struggling in early grades but would also reorient the system to help ensure future students develop a stronger educational base and become less likely to struggle academically in later grade levels.

Under current state law, the superintendent of a low-performing district that receives this designation has 30 days to submit a plan for improvement to the local board of education. The local board must then vote to approve, modify, or reject the plan within the next 30 days. The local board must submit a final plan to the State Board of Education within five days of the local board's approval of the plan. The State Board then reviews the plan and, if appropriate, offers recommendations to modify it. Local boards must provide access to the final plan on their websites.

Colorado has recently made a push to ensure struggling schools incorporate early learning into their turnaround strategies. Colorado established a law in 2017 that updated requirements for school

improvement and turnaround plans to require an early childhood learning needs assessment in addition to the general needs assessment.⁹ Similar to Colorado, the North Carolina General Assembly should require low-performing LEAs to develop early childhood improvement plans as part of efforts to improve performance.

Recommendation 2. The General Assembly should require an assessment of early childhood learning as part of the Department of Public Instruction's comprehensive needs assessment process for districts.

As discussed in Finding 4, the Department of Public Instruction (DPI) can select certain districts needing more intensive support for a comprehensive needs assessment. These assessments provide analysis of districts on key indicators and can help guide district improvement plans. The General Assembly should require that comprehensive needs assessments for LEAs that have one or more low-performing schools serving any of the grades K-3 should include an assessment of early childhood learning. At a minimum, assessments should contain an analysis of

- early education staffing and training levels,
- curricula alignment throughout early education years,
- kindergarten transition supports and collaboration with early childhood education providers, and
- kindergarten preparedness.

DPI should begin including early childhood learning assessments as part of its comprehensive needs assessment program no later than July 1, 2020. At that time, DPI should report to the Joint Legislative Education Oversight Committee on the status of its efforts.

Appendix

Appendix: Characteristics of the 12 Case Study Districts

Agency Response

The Program Evaluation Division submitted a draft of this report to the Department of Public Instruction and State Board of Education for review. The State Superintendent's response is provided following the Appendix.

Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Jeff Grimes, at jeff.grimes@ncleg.net.

Emily McCartha made key contributions to this report. John W. Turcotte is the director of the Program Evaluation Division.

⁹ Colorado Senate Bill 17-103. <https://leg.colorado.gov/bills/sb17-103>.

Appendix: Characteristics of the 12 Case Study Districts

School District	Eligibility for Free and Reduced Lunch	Median Income*	District Membership	Expenditures per Student	Students with Disabilities	English Language Learners	Students Living in Same House as Prior Year	Students Attending Charter	Teacher to Student Ratio
Alleghany County, NC	72%	\$38,944	1,420	\$11,246	14%	7%	90%	0%	12 to 1
Casey County, KY	70%	\$33,031	2,338	10,209	17%	2%	90%	0%	16 to 1
Durant, OK	67%	\$35,575	3,718	8,193	14%	3%	98%	0%	16 to 1
Fayette County, IN	65%	\$41,476	3,618	11,407	16%	0.1%	86%	0%	17 to 1
Henderson County, TN	64%	\$42,711	4,040	8,043	13%	0.2%	86%	0%	16 to 1
Hickory City, NC	63%	\$44,336	4,305	9,113	11%	13%	82%	0%	16 to 1
Johnson County, KY	68%	\$35,629	3,584	10,137	18%	0.1%	89%	0%	16 to 1
Jones County, NC	83%	\$37,256	1,182	12,296	14%	2%	86%	0%	13 to 1
Steubenville City, OH	69%	\$34,769	2,385	10,375	15%	0.1%	91%	0%	17 to 1
Whiteville City, NC	65%	\$28,671	2,289	8,749	10%	3%	85%	21%	17 to 1
Whitley County, KY	79%	\$34,103	4,462	11,003	18%	0.1%	89%	0%	15 to 1
Wilkes County, NC	69%	\$37,173	9,911	8,699	13%	5%	91%	2%	17 to 1
National Average	47%	\$57,652	3,533	\$12,682	14%	4%	87%	1%	16 to 1

Source: Program Evaluation Division based on 2006–2010 Education Demographic and Geographic Estimates and Common Core of Data. Median income figures came from the US Census Bureau's QuickFacts 2018 estimates and district membership is based upon 2017 NCES data. National Average calculations include all districts in the dataset, not just those that are predominantly disadvantaged.



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May 6, 2019

John W. Turcotte, Director Program Evaluation Division
300 N. Salisbury Street, Suite 100
Raleigh, NC 27603-5925

Dear Mr. Turcotte:

I welcome the opportunity to respond on behalf of the Department of Public Instruction (DPI) to the Program Evaluation Division's (PED) final report on *North Carolina Should Focus on Early Childhood Learning in Order to Raise Achievement in Predominantly Disadvantaged School Districts*. The responses in this letter are based on information provided by PED to DPI and State Board of Education staff.

Overall, DPI concurs with PED's findings that much of the achievement gap is created by third grade, and programs and services that support early learning are most effective at preventing and reversing that gap. That is why DPI, under my direction, has done the following:

- Transitioned to a regional support structure to better coordinate support to districts and schools and use a data-driven approach in providing services.
- Collaborated with NC State to establish WOLFPACK WORKS to provide intensive literacy instruction support to less experienced kindergarten through second grade teachers in low-performing districts.
- Developed and disseminated model programs for summer reading camps serving struggling first through third graders and supported legislation to require DPI review of summer reading camp plans.
- Supported expansion of high-quality preschool programs and recommended that DPI approve academic curricula for NC Pre-K programs to ensure alignment with kindergarten readiness.
- Recommended the State invest in adaptive tools to help prepare four-year-olds on the waiting list for NC Pre-K and expand local kindergarten readiness camps.
- Worked to build bridges between preschool and kindergarten instructors and student data.
- Promoted personalized learning as a way to empower educators and students and reduce achievement gaps.

While much is in progress, there is much work left to be done, and we appreciate PED helping to highlight this important issue.

Recommendation 1: The General Assembly should require districts that the State Board of Education identifies as low-performing to create an early childhood learning improvement plan as a component of their required plans for improvement.

Recognizing that there is much important work being done to support and serve disadvantaged children before they are of school age, we would recommend that this requirement be accompanied by

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an overall directive to other agencies and community partners to similarly focus their efforts to support young children and their families residing in these school districts.

As North Carolina strives to become the nation's leading state for learning and teaching by 2030, personalized learning for every student needs to become a focus in every classroom because it meets every student where he or she is on his or her learning journey. Once personalized learning is in place, DPI finds that students can grow at real and sustainable paces. Much like building blocks, there must be a firm foundation. Having taught high school students in a predominantly disadvantaged setting, I found that many of my students could not read on grade level as a direct result of an unstable – and even unformed in some cases – foundation in literacy and other learning fundamentals in their earliest years of life, particularly over their K-3 years. Incorporating personalized learning into required early childhood learning improvement plans will ultimately help our most disadvantaged schools improve early childhood learning results despite an all-too-common deficit of learning tools and resources in many of these students' homes.

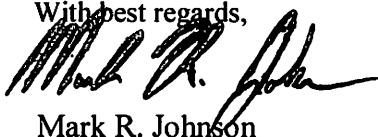
Recommendation 2. The General Assembly should require an assessment of early childhood learning as part of the Department of Public Instruction's comprehensive needs assessment process for districts.

The comprehensive needs assessment process was initially set up to leverage all key public school data, beginning with kindergarten. The rubric has now been extended to address strategies for successful transitions from preschool to kindergarten, including access to early learning and transition programs. NC DPI staff will also review preschool data where available in public preschools. At this time, it would be challenging for NC DPI to include data from private preschool and daycare settings, which are regulated by NC DHHS. We are working to develop connections for longitudinal data systems between NC DPI and NC DHHS, as well as developing bridges between preschool data and kindergarten classrooms.

In addition, the report uses the phrase "early childhood learning". It is recommended that the report define this as pre-kindergarten through 3rd grade. The concern is that readers may interpret this as birth through 3rd grade and create confusion on recommendations of the report.

Additional Feedback. As we take steps to improve the quality of NC Pre-K, we must keep in mind that nearly half of the Pre-K students in our state are enrolled in private Pre-K programs. The students in these private programs would greatly benefit from increased and improved professional development and training being provided to their program administrators and teachers. If additional funding and support personnel were provided to DPI's Office of Early Learning (OEL), the agency could leverage its expertise to offer meaningful professional development and training to these private education programs.

With best regards,

A handwritten signature in black ink, appearing to read "Mark R. Johnson", is written over the typed name.

Mark R. Johnson