

---

## A Correlational Study of School Report Card Grades and Degrees of Poverty

Morgan V. Blanton

*Appalachian State University*, [blantonmv@appstate.edu](mailto:blantonmv@appstate.edu)

Follow this and additional works at: <https://digitalcommons.gardner-webb.edu/joel>



Part of the [Educational Assessment, Evaluation, and Research Commons](#), [Educational Leadership Commons](#), and the [Elementary and Middle and Secondary Education Administration Commons](#)

---

### Recommended Citation

Blanton, Morgan V. () "A Correlational Study of School Report Card Grades and Degrees of Poverty," *Journal of Organizational & Educational Leadership*: Vol. 6 : Iss. 1 , Article 4.

Available at: <https://digitalcommons.gardner-webb.edu/joel/vol6/iss1/4>

This Article is brought to you for free and open access by the School of Education at Digital Commons @ Gardner-Webb University. It has been accepted for inclusion in Journal of Organizational & Educational Leadership by an authorized editor of Digital Commons @ Gardner-Webb University. For more information, please contact [digitalcommons@gardner-webb.edu](mailto:digitalcommons@gardner-webb.edu).

## **Introduction**

Education continues to be the responsibility of individual states, therefore the ways in which schools are evaluated and results are reported vary from state to state (US Department of Education, 2017; Education Commission of the States, 2014). This study investigated how North Carolina evaluates its schools using data collected from the published School Report Cards. The School Report Card is intended to serve as a tool for providing transparency to the public about a school's performance using the letter grade system; however, school evaluation is a complex process that a letter grade does not fully communicate.

Two main factors are used in North Carolina to derive the letter grade on the School Report Card: academic achievement and academic growth. Because researchers have discovered a strong correlation between academic achievement and poverty (Dotson & Foley, 2017; Sacks, 2016; Dotson & Foley, 2016; Ladd, 2012; Berliner, 2009; Blazer & Romanik, 2009), this study uses testing and demographic data found on the North Carolina Department of Public Instruction's (DPI) accountability website and the School Report Card database to examine the correlation between the percentage of economically disadvantaged students (EDS) and letter grades earned on the School Report Card. Furthermore, this study explores the correlation between the earned letter grade and the school's academic progress (growth). All schools in the state that have a published School Report Card, growth data, and economically disadvantaged student percentage demographics (EDS) were included in this study.

### **Poverty and Student Achievement**

Researchers have discovered a strong correlation between academic achievement and poverty (Dotson & Foley, 2017; Sacks, 2016; Dotson & Foley, 2016; Ladd, 2012; Berliner, 2009; Blazer & Romanik, 2009). For example, Doton and Foley indicate that "poverty is more influential

to academic performance than is gestational exposure to cocaine” (pg. 35). Approximately 31% of American schools outperform others in fifty-four nations; however, these high performing schools have few students who struggle with poverty. Berliner (2009) explains, “This suggests that if families find ways for their children to attend public schools where poverty is not a major school challenge, then, on average, their children will have better achievement test performance than students in all but a handful of other nations” (pg. 4).

Many economically disadvantaged students (EDS) start school significantly behind their peers when it comes to language development (Sacks, 2016; Rusnack, 2011) and access to resources (Lacour & Tissington, 2011); however, a number of additional non-school factors continue to have a negative impact on student achievement as these students progress through their educational journey (Sacks, 2016; Ladd, 2012; Blazer & Romanik, 2009). Some non-school factors that influence students living in poverty include prenatal disadvantages, increased illness and injury, nutritional problems, exposure to pollutants, hazardous neighborhoods, struggle to survive, family violence, lack of adult attention, residential instability, and lack of educational activities and materials. Jensen (2009) suggests that exposure to such living conditions can cause these students to experience chronic stress. He notes that chronic stress “exerts a devastating, insidious influence on children's physical, psychological, emotional, and cognitive functioning—areas that affect brain development, academic success, and social competence” (Jensen, 2009, pg. 22).

Because of these non-school factors, academic achievement in high-poverty schools is likely to be lower than in more affluent schools (Sacks, 2016; Jensen, 2013). These factors are compounded in schools with high percentages of EDS, and student achievement typically declines when poverty percentages increase (Blazer & Romanik, 2009). Berliner states, “As wonderful as

some teachers and schools are, most can't eliminate inequalities that have their roots outside their doors and that influence events within them... A good portion of the achievement gap is caused by non-school factors and schools, as they are ordinarily configured, are not in a position to eliminate those gaps" (Blazer & Romanik, 2009, pg. 7).

### **The History of Accountability in North Carolina**

Beginning in the early 1990s, North Carolina initiated a school accountability model called the "ABCs." Under this model, schools were evaluated based on whether or not students met predicted growth each year (Fuller & Ladd, 2013) and were recognized for grade-level proficiency. Schools were categorized as exemplary (also called "high growth"), meets expectation, no recognition, and low-performing based on the degree to which their students met predicted growth on End-of-Grade assessments. Further, teachers were awarded financial compensation based on how well the school met predicted growth. If a school exceeded the predicted growth targets (by 10% or higher), teachers in that school would receive a \$1,500 bonus. For meeting predicted growth targets, teachers would receive a \$750 bonus.

Growth measures were used for financial compensation; however, schools were also evaluated based on proficiency. These evaluations resulted in merit-based recognition in the following five categories based on proficiency and growth (Table 1). Public recognition of these proficiency levels was communicated by a banner displayed in the school.

Schools of Excellence, Distinction, and Progress all met or exceeded growth but had varying amounts of proficiency. Priority was placed on proficiency for these categories because the difference in levels was based on the percentage of students performing on grade level. No Recognition status was awarded to schools in which at least half of the student body performed at grade level but did not meet expected growth. No Recognition could even be awarded to schools

in which 100% of the students were performing at grade level, which in essence prioritizes growth over proficiency for this evaluation category. On the lowest end of this evaluation continuum were schools considered low performing schools. These schools did not meet proficiency expectations and grade-level proficiency was 50% or below.

Table 1

*North Carolina’s ABCs Accountability Model Categories*

Level of Distinction	Proficiency	Growth
School of Excellence	90-100% at grade level	Met or Exceeded
School of Distinction	80-90% at grade level	Met or Exceeded
School of Progress	60-80% at grade level	Met or Exceeded
No Recognition	50-100% at grade level	Did not meet
Low Performing School	Less than 50% at grade level	Did not meet

Beginning in 2001 with No Child Left Behind through 2013, adequate yearly progress (AYP) was calculated for subgroups of students based on characteristics such as ethnicity, gender, socioeconomic status, special needs, and migrant status. AYP was reported as a binary measure using terms such as “met” or “not met.” Whether or not a school met AYP for each subgroup was factored in as part of the revised school evaluation model. Through the NCLB legislation, a goal of 100% proficiency by 2014 for all subgroups was established. Results of the ABCs and AYP evaluations were both reported on the publicized reports.

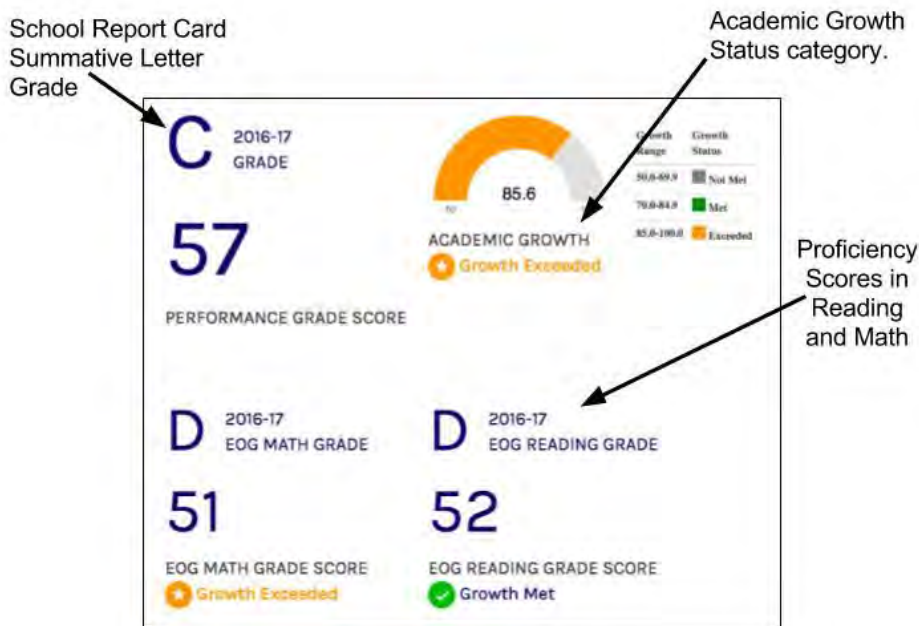
Beginning in 2014 through the year of this study (2017), and in response to the Race to the Top national incentive, a new evaluation model was implemented using a report card system. School Report Cards are provided annually on the State’s website in an effort to be transparent with the public about its local schools (NCDPI, 2019a). School Report Cards include information

about each school’s performance (proficiency and growth), student characteristics (readiness, poverty, demographics), teacher qualifications, and school environment data (attendance, behavior, technology, books).

In addition to proficiency and growth, each school’s data is shown in comparison to other schools in the district and across the state. With the new model, schools receive a letter grade (A, B, C, D, or F) based on proficiency and growth. School Report Card letter grades are calculated using a weighted formula that considers student achievement (proficiency) and student progress (growth). Figure 1 provides a snapshot of the proficiency and growth section of the School Report Card.

Figure 1

*School Report Card Excerpt*



The summative letter grade is located in the top left corner, followed by the academic growth category. Beneath those scores are the letter grades earned based on reading and math testing data. Using a weighted formula (80% proficiency and 20% growth), the results of the

calculations are then converted to a letter grade and reported to the public based on a fifteen-point scale (A = 85-100, B = 70-84, C = 55-69, D = 40-54, and F = below 40). If a school did not receive a School Report Card grade it was not used in this study.

### **Perceptions of Letter Grades**

While school evaluations had been conducted and publicized since the early 1990s, the new evaluation model closely mimics the letter grading system that is sent to parents regarding their individual student's performance in various subject areas. When exploring the fundamental idea and perceptions of School Report Cards, first consider students' individual report cards, a concept with which most Americans are well experienced. Traditional grading typically evaluates knowledge and performance using an A, B, C, D, or F letter grade. Letter grades were first introduced at Harvard University in 1897 using an A, B, C, D, E system of reporting academic achievement (Durm, 1993). Beginning in 1911 through the 1960s, educators began tweaking the letter grading system and eventually moved to an A, B, C, D, F system of reporting. Using a basic bell curve model, a grade of A was designated for excellence and high achievement, a C indicated average performance, and an F indicated failure to meet grade level expectations. Presently, this grading scale is still widely used; however, the 1960s letter grades communicated a different message than they do today.

Rojsaczer and Healy (2012) note that grade inflation has occurred since the 1960s and suggest a "C" is no longer considered average. As of 2008, an "A" on the report card has become the new average with approximately 43% of university students earning an A. In 1960, an average grade was considered a "C" because 35% of students earned Cs and an A was rare. Due to grade inflation, Rojsaczer and Healy proposed that the expectation of an A for ordinary performance has become the norm.

Based on these findings regarding common perceptions of students' individual report cards, this researcher suggests that the same perceptions may also hold true of school-level report cards. If grade inflation on student report cards has skewed the public's view of the letter grading system at the student-level, then it can be extrapolated that the same views may hold true for society's view of letter grades used for school-level evaluation. If an A is now the norm and the traditional grading bell curve no longer exists for current grading practices, then a grade of C does not communicate "average" but is now viewed as an indicator of poor performance. This evolving and confusing perception of grading led the researcher to examine the school-level grades more closely to better understand what School Report Cards are communicating to the public about schools in North Carolina.

### **Methods**

This quantitative study examined existing data sources published on the North Carolina Department of Public Instruction's Accountability website and on the School Report Card database. The researcher located demographic, proficiency, and growth status data on the State's accountability website, the School Report Card database, and through personal communication with data analysts in the State's accountability division (NCDPI, 2019a; NCDPI, 2019b; R. Chong, personal communication, December 15, 2017; C. Sonneman, personal communication, December 18, 2017). Only schools on the State's website that had a School Report Card grade and growth status were included in this study (N=2,465). Data was disaggregated and analyzed using statistical measures to describe the data set and to examine the linear relationship among the data.

### **Data Sources**

The purpose of this study is not to argue for or against the use of EOG/EOC data or EVAAS teacher effectiveness data, nor is this study aiming to acknowledge or recount the tests'



validity, or lack thereof. The purpose of this study is solely to describe what is being communicated to the public regarding school effectiveness using the current evaluation model. This study used multiple data sources located on School Report Cards and from the Executive Summary Report (NCDPI, 2019a; NCDPI, 2019b) including: summative letter grade, academic growth status, and EDS percentage. Summative Letter Grades were explained in a previous section; therefore, more information will be provided about EDS percentage, academic growth status, and the Executive Summary report in this section.

### ***EDS Percentage***

The researcher contacted the accountability division to learn more about data sources used to determine a school's EDS percentage for the School Report Card. After discussion with the data analysts, the researcher learned that the EDS percentage reported on the School Report Card is determined by community eligibility provision data (R. Chong, personal communication, December 15, 2017; C. Sonneman, personal communication, December 18, 2017). Community Eligibility Provision (CEP) data are collected by the federal government and are derived from multiple sources including percentages of free and reduced lunch, homelessness, migrant students, children in foster care, and other high poverty factors (NCDPI, 2019c). Then, DPI's accountability department receives this data and uses it as a data source for communicating a school's percentage of economically disadvantaged students on the School Report Card.

### ***Academic Growth Status***

School academic growth is calculated and reported on the School Report Card using data collected from the Education Value-Added Assessment System (EVAAS). EVAAS is a customized software system that uses existing testing data to determine teacher impact on student academic growth (SAS, 2017). There are three growth status categories: Did Not Meet, Met, and

Exceeds. Academic growth status categories represent “the academic progress of a student compared to the average progress of students across the state in a given grade and/or subject” (SAS Institute, 2017).

When students are progressing at an average rate consistent with students across the state with similar testing histories, the school has “met” growth standards. On the other hand, when students in a school progress at an above average rate compared to other students across the state, then that school is given an “exceeds growth” status. (SAS Institute, 2017). The last category is “did not meet” growth expectations. This label is used to describe schools where students did not progress at an average rate and therefore did not meet growth expectations.

### ***Executive Summary***

The Department of Public Instruction publishes an annual Executive Summary (NCDPI, 2019b) that reports statewide testing results by grade range, School Report Card grades, proficiency levels, growth status, and socioeconomic status. The researcher disaggregated the 2016-2017 data in multiple ways, including School Report Card grades and proficiency, School Report Card grades and growth status, school type (grade level configuration) and growth status, and EDS and School Report Card grades.

The Executive Summary disaggregates data using broad categories to describe EDS such as “50% or More Poverty” or “Less than 50% Poverty” (pg.12). However, there is much variation among levels of poverty within these categories. Broad categories such as those reported on the Executive Summary may be a useful snapshot of a State’s performance; however, broad reporting does little to help educators understand the variation found within these categories. A school with five percent poverty faces very different struggles than a school with 49% poverty. The same could be true for a school with 51% poverty in comparison to a school with 95% poverty. Because of the

potential variations, the researcher sought more specific data for subgroups within these two categories regarding the relationship between EDS and academic growth. In this study, EDS data was disaggregated into nineteen subgroups that represent poverty levels in five-point increments.

### ***Assumptions about Data Sources***

Because this study is not intended to advocate for or against the use of EOG/EOC data or EVAAS teacher effectiveness data, it is important to note the assumptions on which this research relies due to the data sources used in the current school evaluation model. The first assumption is that the assessments used to measure student learning (End of Grade and End of Course) have high evidence of validity and reliability on which to draw conclusions about student achievement. Based on external validation, the End of Grade (EOG) and End of Course (EOC) assessments have high internal reliability estimates ranging from 0.88 to 0.93. Based on Kane's Framework (2001), the EOGs and EOCs have met the standards of validity after an "evaluation of sources of procedural, internal, and external validity evidence" (NCDPI, 2019d).

Again, this study is not intended to argue the validity of these measures but is acknowledging that the study's findings are based on the assumptions that EOGs/EOCs have adequate validity on which to base the state's evaluation model of school and teacher effectiveness. While the use of value-added measures is a debated topic (Kane, 2014; Amrein-Beardsley & Holloway, 2019; Shen, Simon, & Kelcey, 2016), because the purpose of this research is to describe the current state of school evaluation in North Carolina, the researcher decided to use EVAAS as an existing data source found on the school report card and used to calculate School Report Card letter grades. EVAAS is the measure used by the State to communicate a district's, school's, and/or teacher's impact on student learning based on academic progress (growth).

EVAAS uses EOG and EOC data to statistically analyze students' testing histories for comparison purposes. EVAAS is a value-added assessment which is "a statistical analysis used to measure the impact of districts, schools and teachers on the academic progress rates of groups of students from year-to-year" (SAS Institute, 2017). EVAAS uses a multi-year statistical analysis approach which yields a reliability coefficient of 0.70-0.80 that reduces year to year variation and isolates teacher effectiveness on student learning.

Harvard University's Thomas Kane (2014) noted, "there is now substantial evidence that value-added estimates capture important information about the causal effects of teachers and schools." Therefore, the second assumption is that using EVAAS to measure academic growth is a valid measure of school effectiveness. If the state's evaluation model draws data from these measures and believes them to be valid and reliable data sources, then this study's purpose seeks to examine what is being communicated to the public about schools and teachers through this evaluation model.

### **Data Analysis**

The researcher disaggregated School Report Card and EVAAS data by letter grade to determine the number of schools within each growth status category (see Table 2). All schools reporting an EVAAS growth status are included in these data. The researcher also consulted the EVAAS public site (SAS Institute, 2017) to verify the information regarding growth status reported for each school in addition to the School Report Card database.

Table 2

*School Report Card (SRC) Letter Grades and EVAAS Growth Status*

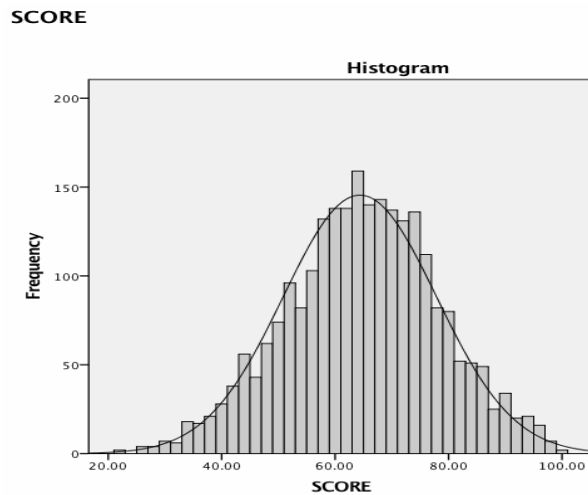
<b>SRC Letter Grade</b>	<b>Exceeds</b>	<b>Met</b>	<b>Did Not Meet</b>
A+NG	45	41	1
A	52	33	2
B	288	344	73
C	227	511	291
D	52	218	193
F	1	37	57
<b>Total</b>	<b>665</b>	<b>1,184</b>	<b>617</b>

For analysis purposes, the researcher collected EDS data for all schools then converted the percentage into nineteen subgroups based on a five-point interval scale. For example, a school with 43% EDS on the School Report Card would be aggregated into a “40% EDS” subgroup with other similar schools (all reporting 40% to 44% EDS). Additionally, to protect student privacy, schools with less than five percent EDS were not reported on the School Report Card and schools with more than 95% EDS were reported as 95%. Therefore, subcategories of zero percent EDS and 100% EDS were not disaggregated in this study.

Data gathered for this study included 2,465 schools. The researcher created a histogram (Figure 2) and calculated the mean School Performance Grade (SPG) raw score for the total population (mean = 64.36) to determine if the data set was normally distributed. Figure 2 provides the histogram and illustrates the normal distribution of this data set. Further calculations indicate that 49.7% of this population’s SPG scores are below the mean and 50.3% are above the mean.

Figure 2

*School Performance Grades compared to normal distribution*



Additional analysis included calculating School Report Card letter grade cumulative percentages within each growth status category. Based on these data, 42% of the exceeds growth category (N=279) and 62% of the met growth category (N=729) made a C or D on the School Report Card. These schools received the same summative grade on the School Report Card as the 484 schools that did not meet growth expectations (78% of the growth category).

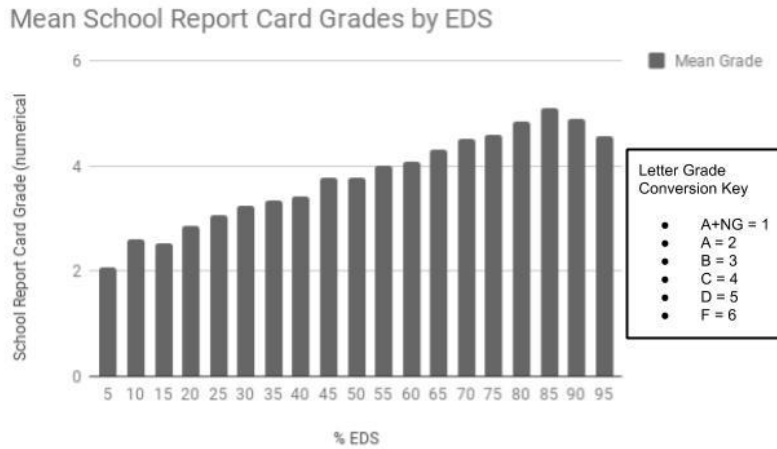
To gain a better understanding of the relationship between EDS and the School Report Card grade, the researcher converted the letter grades from nominal data to ordinal data to determine the mean grade for each EDS subgroup. Figure 3 provides a visual representation of the average School Report Card grade for each of the EDS subgroups. The key (at right) provides an explanation of how the letter grades were converted to numeric grades for the purpose of determining the mean and for use during further correlational analysis.

Visibly noticeable in Figure 3 is the upward trend as EDS increased so did the mean letter grade on the School Report Card (whereas an A+NG equals one and an F equals a six). Schools with 5-50% EDS had mean letter grades ranging from A to B; however, starting at 55% EDS, the

mean letter grades ranged between C and D. These results indicate within this sample that schools with higher EDS typically received lower report card grades.

Figure 3

Mean School Report Card Grades by EDS (*letter grades converted to numeric grades*)



Because the literature heavily supports a strong correlation between poverty and proficiency (Dotson & Foley, 2017; Dotson & Foley, 2016; Ladd, 2012; Berliner, 2009; Blazer & Romanik, 2009) and the School Report Card is weighted in favor of proficiency overgrowth, the researcher further examined these data to learn more about the correlation between poverty and academic growth. A Pearson Correlation was used to calculate the correlation coefficient ( $r$ ) to determine the strength of a linear model to describe the relationship between the percentage of economically disadvantaged students (independent variable), the School Report Card grade (dependent variable), and growth status (dependent variable).

Correlation coefficients calculated are between -1.0 and +1.0. A perfectly correlated data set would have an  $r$  value of one, either positively or negatively sloped. For this research, the correlation coefficient was interpreted using the following scale (Weir, n.d.):

- .00-.19 “very weak”
- .20-.39 “weak”

- .40-.59 “moderate”
- .60-.79 “strong”
- .80-1.0 “very strong”

Descriptive statistics were used to describe the data sets. Based on the disaggregated data, 69% of schools earning a School Report Card grade of C were schools with  $\geq 50\%$  EDS, while 31% of schools with  $< 50\%$  EDS earned a grade of C. The Pearson Correlation calculated an  $r$  value of 0.64 indicating a “strong” correlation between varying degrees of poverty and School Report Card grades (N=2,465). The results of this correlation are not meant to imply causation. Poverty does not cause lower report card grades; however, the results of this correlation suggest a strong relationship exists between these two variables. Based on these data and the current formula for grade calculation (80% proficiency, 20% growth), schools with higher poverty levels tend to earn lower grades on the School Report Card.

Furthermore, the Pearson Correlation calculated an  $r$  value of 0.10 indicating a “very weak” correlation between EDS and growth status. Growth status is determined by student progress over time. Table 4 details the number of schools in each growth status category disaggregated by EDS subgroup. Cumulative percentages were calculated, and these data indicated 40% of schools in this sample were categorized into the 50%, 55%, 60%, and 65% EDS subgroups (9.86%, 9.94%, 10.79%, and 9.57% respectively).



Table 4

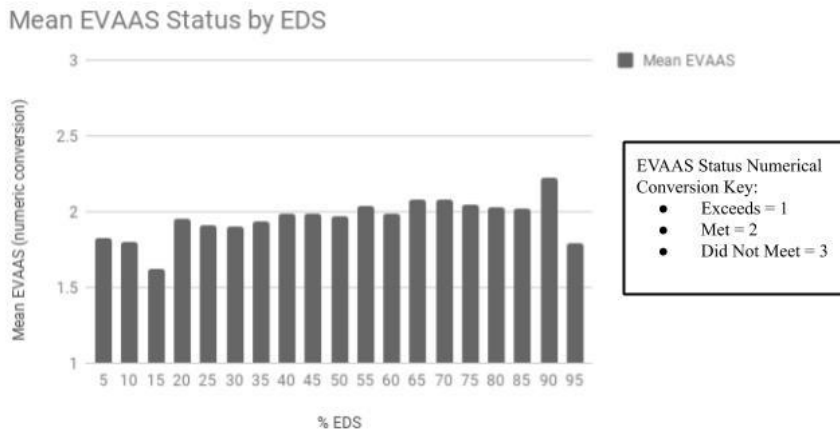
*EDS and Growth Status*

<b>% EDS</b>	<b>Exceeds</b>	<b>Met</b>	<b>Did Not Meet</b>	<b>Total</b>
5	27	35	14	76
10	18	18	9	45
15	28	31	4	63
20	30	33	26	89
25	29	51	20	100
30	41	44	30	114
35	39	74	30	143
40	51	97	49	197
45	52	75	50	177
50	74	103	66	243
55	49	138	58	245
60	71	127	68	266
65	54	109	73	236
70	33	85	46	164
75	30	57	36	123
80	17	44	19	80
85	8	30	9	47
90	2	10	6	18
95	12	23	4	39
<b>Total</b>	<b>665</b>	<b>1,184</b>	<b>617</b>	<b>2465</b>

Figure 4 provides a visual representation of the mean EVAAS status for each EDS subgroup. Nominal data was converted to ordinal data so means could be calculated for each subgroup. Schools that earned an “exceeds growth” status were calculated as a one, “met growth” schools were represented with a two, and “did not meet” growth schools were represented with a three for this calculation. EVAAS status means ranged from 1.61 to 2.22 including the 15% EDS and 90% EDS outliers. The remaining subgroups ranged from 1.79 to 2.00, which supports the correlation results indicating a very weak relationship (0.10) between EDS and growth status.

Figure 4

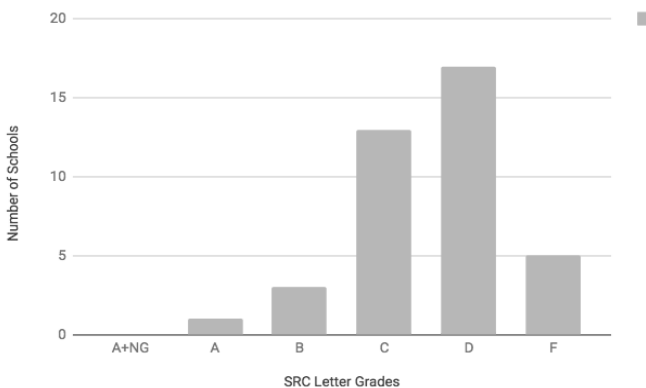
*EVAAS growth status by EDS (converted from nominal data to ordinal data)*



Because there is a “very weak” correlation between EDS and growth status and a “strong” correlation between EDS and School Report Card grades, the researcher further investigated the subgroup with the highest level of poverty through both School Report Card and growth status perspectives. The “95% EDS” subgroup (N=39) is negatively skewed when analyzing growth status (see Table 4), yet School Report Card data indicate a cumulative percentage that leans toward lower summative grades (see Figure 5).

Figure 5

*95% EDS and School Report Card Letter Grades*



Of this highly impoverished subgroup, 56% met growth expectations and 30% exceeded expectations. However, 77% of this subgroup earned a C or D as the summative letter grade. Furthermore, 13% of this subgroup received an F on the School Report Card, although 80% of

those “F” schools met growth expectations. Therefore, 90% of this subgroup received a C, D, or an F on their School Report Card, yet 86% of these schools met or exceeded growth expectations.

### **Discussion**

School evaluation is a complex process, yet the use of a single letter grade communicates simplicity. Though it is efficient to evaluate schools based on two data sources (proficiency and growth), the current method does not communicate the most accurate picture of a school. The findings from this study agree with current literature noting poverty continues to have a strong correlation with low student achievement (Dotson & Foley, 2017; Sacks, 2016; Dotson & Foley, 2016; Ladd, 2012; Berliner, 2009; Blazer & Romanik, 2009). Because the current formula used to calculate School Report Card letter grades is heavily weighted with proficiency data over growth data, poverty also has a significant impact on a school’s letter grade.

Using the current model, a social justice issue arises that could create negative (and potentially skewed) public perceptions of high poverty schools based on these letter grades. Data indicate a strong correlation ( $r = 0.62$ ) between EDS and School Report Card grades; however, there is a “very weak” correlation between EDS and the amount of annual student growth ( $r = 0.10$ ). Using the current School Report Cards weighted formula, 42% of the schools that exceeded growth expectations and 61% of the schools that met growth expectations were reported as C and D schools during the 2016-17 school year. Furthermore, 72% of all “C” schools either met or exceeded growth expectations, which indicates that students in these schools made at least a year’s worth of academic progress during the 2016-17 academic school year. Rojsaczer and Healy (2012) have indicated that C is no longer viewed as average and that a grade of A has become the norm. Therefore, based on that presumption, though 22% of the “C” schools ( $N=227$ ) had a higher than average impact on student learning, the public now has a less than average perception of them.

Because of non-school factors related to socioeconomic status, some students walk into classrooms already proficient and others are significantly behind. Therefore, it begs to question whether the summative grades found on the School Report Cards accurately communicate a school's impact on student learning to the public for these students. If EVAAS reports the school's impact on student learning, and these schools are meeting or exceeding expectations of yearly progress (growth), does a letter grade of C or D communicate this positive impact on student learning to the public?

Because the formula used to determine the letter grade is weighted heavily with proficiency scores (80% proficiency and 20% growth), it is unclear whether the School Report Card is reporting the schools' impact on student learning or situational impact on student learning (levels of poverty). Since poverty is strongly correlated with student achievement, then it is evident that this relationship may adversely affect School Report Card grades if this discrepancy is not accounted for by the evaluation formula.

Because the literature supports the negative impact poverty can have on student achievement, these letter grades may further perpetuate misunderstanding about high poverty schools and their impact on student learning. Students from high-poverty schools like those in the "95% EDS" subgroup are meeting and exceeding annual growth expectations; however, their School Report Card does not reflect the same summative evaluation because of the weighted formula. These data as well as previous research indicate a strong relationship between poverty and proficiency (Dotson & Foley, 2017; Sacks, 2016; Dotson & Foley, 2016; Ladd, 2012; Berliner, 2009; Blazer & Romanik, 2009). Therefore, three recommendations for change are suggested.

### ***Revise Use of Summative Letter Grades***

Based on these findings, the researcher suggests altering the age-old practice of summative letter grades for school evaluation. Awarding letter grades as an evaluation method was first introduced at Harvard in 1897 (Durm, 1993) and has been slightly tweaked since. If moving completely away from a summative letter grade is an option, policymakers should consider looking toward the standards-based grading initiative for ideas about reporting that mirrors that of standards-based student report cards.

Standards-based grading has become more popular in schools because supporters suggest it provides a more accurate picture of student learning (Rosales, 2013; Guskey, 2011). For example, instead of earning a “B” in math, students are now evaluated on multiple concepts such as polynomials, linear equations, systems of equations, and quadratic equations. Arguing for standards-based grading over traditional subject-by-subject grades, Guskey (2011) notes that a standard-based approach provides parents with more specific information regarding their child’s progress (academic growth) and proficiency than traditional summative letter grades by subject.

He suggests that educators cannot continue the “we’ve always done it that way” approach to classroom grading and reporting; however, because it is a deeply rooted practice, educational researchers must offer alternatives to replace current practices instead of touting change to tradition without suggestions for improved practices for the future. Because student report cards are beginning to experience revision, this researcher suggests that school-level report cards and the current school-level evaluation model also undergo revision.

Currently, the School Report Cards are used to provide transparency about a school to the public and include information about product (proficiency) and progress (growth). However, these components continue to be combined into a final “summative” letter grade on the report card. Why

must the traditional approach to grading continue? It is possible that the current summative letter grade overshadows the more specific data regarding growth and proficiency on the report card.

Why not simply leave the scores disaggregated on the School Report Card without combining them into a weighted letter grade? Guskey's (2011) idea could be translated into a whole school evaluation model that removes the summative letter grade and focuses more on the individual components from which the summative grade was derived. What if the summative letter grade was removed and school evaluations were reported based on how schools are doing not just with proficiency and growth but also with student attendance, teacher turnover, graduation rates, etc. This information is currently reported and could easily be used as part of a whole-school evaluation. Currently, the public can identify the school's attendance rate, but has no benchmark to determine if the rate is acceptable or not. Evaluating and reporting scores for all of these components may provide the public with a better picture of the school, beyond the heavily weighted proficiency letter grades.

Based on these findings, this researcher suggests modifying the current School Report Card to include a move towards a standards-based reporting approach and away from the current configuration of the weighted formula. The public has a right to know how its local schools are performing; however, the current letter grade system may be misleading the public's perception of some schools because of the weighted nature of the final grade. Removing the summative grade and focusing solely on the components used to evaluate the school could provide more clarity.

### ***Alter the Formula***

If summative letter grades must continue to be part of the State's accountability model, a change to the evaluation formula is essential to account for non-school factors. Having multiple measures for evaluating schools is an effective method to providing a well-rounded picture of the

school; however, the weighted nature of the current formula favors proficiency more than growth and should be revised since proficiency is correlated with many non-school factors.

Some states use multiple measures on which to base their evaluation of schools. For example, Oklahoma's School Report Cards (Stegman, 2013) include three evaluation components: proficiency (33%), student growth (34%), and whole-school improvement (33%). Proficiency is derived from state test scores. Student growth is divided into two categories each worth 17% of the total grade: growth index (reading and math) and lowest quartile growth index (reading and math). In this model, growth is weighted slightly more than proficiency and is disaggregated to include specific data regarding growth for the lowest achievers. Whole-school improvement is determined based on data regarding graduation rates, attendance, advanced course performance, and other factors.

Though this model is not perfect, it does provide a more balanced option than the current model used in North Carolina. The researcher believes this model along with some other factors such as student attendance, teacher turnover, and graduation rates could be combined to provide a more accurate picture of how schools are performing.

### ***Investigate Academic Growth and Other Factors***

For future research, conducting another correlational study to examine the relationship between growth status and other factors found on the School Report Card such as incoming student readiness, teacher experience levels, graduate degrees and/or certification attainment, and turnover rates within a school may uncover other potential reasons for the difference in growth among the schools. Additionally, investigating the relationship between grade configurations (elementary, intermediate, middle, and high schools), design (e.g. early colleges, magnets, charters), or school

schedules (traditional and year-round) could provide a clearer understanding of potential correlations with rates of student learning.

Heath and Heath (2010) suggest finding “bright spots” when seeking strategies to stimulate positive change. “Bright spots” are places where success happens despite all odds. They suggest using these bright spots as a roadmap knowing that change is possible based on bright spot results. When seeking change, schools may need the hope that change is possible and other schools in the state could provide that hope. Further research examining demographic factors could be the beneficial first step for schools as they search for bright spots by initially understanding trends across the State.

### **Conclusion**

Over 1,000 schools that met (N=729) or exceeded (N=279) growth expectations were reported as C or D schools. Interestingly, 69% of the C schools are from high poverty communities. Based on their growth status, these schools are effectively teaching students from varying backgrounds, yet their students’ proficiency is driving down the overall summative letter grade. Because proficiency and EDS are highly correlated, and growth status is a measure of teacher impact (SAS Institute, 2017), this researcher suggests further defining what makes our schools effective.

If teacher impact on student progress (growth) is a more accurate measure of effectiveness than proficiency levels, then a call for policy revision is in order. If not, then continuing to weight proficiency significantly more than growth is ignoring what research suggests about the impact of poverty on student achievement. Therefore, until School Report Card formula matches what is known about the impact of poverty on proficiency and either removes the summative letter grade



or at least equalizes the importance of student progress (growth) within the formula, this researcher concludes that the School Report Card could continue to be misleading to the public.

## References

- Amrein-Beardsley, A., & Holloway, J. (2019). Value-Added Models for Teacher Evaluation and Accountability: Commonsense Assumptions. *Educational Policy*, 33(3), 516–542.
- Berliner, D.C. (2009). *Poverty and Potential: Out-of-School Factors and School Success*. Retrieved on December 12, 2017 from <https://files.eric.ed.gov/fulltext/ED507359.pdf>
- Blazer, C. & Romanik, D. (2009) *The effect of poverty on student achievement*. Retrieved on December 12, 2017 from <https://eric.ed.gov/?id=ED544709>
- Brooks-Gunn, J., & Duncan, G. (1997). The effects of poverty on children. *Children and Poverty* (7), 2, 55- 71.
- Dotson, L. & Foley, V. (2017). *Common Core, Socioeconomic Status, and Middle Level Student Achievement: Implications for Teacher Preparation Programs in Higher Education*. Retrieved on December 14, 2017 from <http://www.ccsenet.org/journal/index.php/jel/article/view/69926>
- Dotson, L., & Foley, V. (2016). Middle Grades Student Achievement and Poverty Levels: Implications for Teacher Preparation. *Journal Of Learning In Higher Education*, 12(2), 33-44.
- Durm, M.W. (1993). *An A is not an A is not an A: A history of grading*. Retrieved on January 15, 2018 from [http://www.indiana.edu/~educy520/sec6342/week\\_07/durm93.pdf](http://www.indiana.edu/~educy520/sec6342/week_07/durm93.pdf)
- Dwyer, R. (2017). *Big questions: Who made the ABC song?* Retrieved on December 12, 2017 from <https://newsela.com/read/elem-big-q-alphabet-song/id/33726/>

- Education Commission of the States. (2014). *Rating States, Grading Schools What Parents and Experts say States Should Consider to Make School Accountability Systems Meaningful*. Retrieved on January 15, 2018 from <http://www.ecs.org/docs/rating-states,grading-schools.pdf>
- Fuller, S. C., & Ladd, H. F. (2013). School-Based Accountability and the Distribution of Teacher Quality across Grades in Elementary School. *Education Finance and Policy*, 8(4), 528–559.
- Guskey, T. (2011). *Five obstacles to grading reform*. Retrieved on December 14, 2017 from <http://www.ascd.org/publications/educationalleadership/nov11/vol69/num03/Five-Obstacles-to-Grading-Reform.aspx>
- Heath, C., & Heath, D. (2010). *Switch: How to change things when change is hard*. New York: Broadway Books.
- Jensen, E. (2013). *Engaging students with poverty in mind: Practical strategies for raising achievement*. Alexandria, Va.: ASCD
- Jensen, E. (2009). *Teaching with poverty in mind: what being poor does to kids' brains and what schools can do about it*. Alexandria, Va.: ASCD
- Kane, T.J. (2014) *Do Value-Added Estimates Identify Causal Effects of Teachers and Schools?* Retrieved on December 12, 2017 from <https://www.brookings.edu/research/do-value-added-estimates-identify-causal-effects-of-teachers-and-schools/>
- LabWrite Resources (2017) Linear regression in excel. Retrieved on December 19, 2017 from <https://projects.ncsu.edu/labwrite/res/gt/gt-reg-home.html>.

Lacour, M., & Tissington, L. D. (2011). The Effects of Poverty on Academic Achievement. *Educational Research And Reviews*, 6(7), 522-527.

Ladd, H. F. (2012). Education and Poverty: Confronting the Evidence. *Journal Of Policy Analysis & Management*, 31(2), 203-227. doi:10.1002/pam.21615

North Carolina Department of Public Instruction. (2019a). *School Report Cards*. Retrieved on December 19, 2019. <https://www.dpi.nc.gov/data-reports/school-report-cards>

North Carolina Department of Public Instruction. (2019b). *Accountability Data Sets and Reports*. Retrieved on December 19, 2019 from <https://www.dpi.nc.gov/districts-schools/testing-and-school-accountability/school-accountability-and-reporting/accountability-data-sets-and-reports#2016%E2%80%9317-documentation>

North Carolina Department of Public Instruction. (2019c). *Community Eligibility Provision (CEP) for Free and Reduced Price Meals*. Retrieved on December 19, 2019 from <https://www.dpi.nc.gov/districts-schools/federal-program-monitoring/title-i-part/community-eligibility-free-and-reduced-price-meals>

North Carolina Department of Public Instruction (2019d). *Technical Information for State Tests*. Retrieved on December 19, 2019 from <https://www.dpi.nc.gov/districts-schools/testing-and-schoolaccountability/technical-information-state-tests>

Rojstaczer, S. & Healey, C. (2012). *Where A is ordinary: The evolution of*

- American college and university grading. Teachers College Record.* 114. Retrieved on January 15, 2018 from <https://rampages.us/profjhonn/wp-content/uploads/sites/111/2015/10/Where-A-Is-Ordinary-2012.pdf>
- Rosales, R. B. (2013). *The Effects of Standards-Based Grading on Student Performance in Algebra 2*. Retrieved on January 15, 2018 from <https://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1052&context=diss>.
- Rusnak, E. (2011). *Addressing the Effects of Poverty on Early Language Development: A Feasibility Study for a Novel Parent Language Stimulation Program*. (Electronic Thesis or Dissertation). Retrieved on December 12, 2017 from <https://etd.ohiolink.edu/>
- Sacks, V. H. (2016). *The other achievement gap: Poverty and academic success*. Retrieved on December 15, 2017 from <https://www.childtrends.org/the-other-achievement-gap-poverty-and-academic-success/>
- SAS Institute (2017). *EVAAS North Carolina*. Retrieved on December 6, 2017 from <https://ncdpi.sas.com/>
- Shen, Z., Simon, C. E., & Kelcey, B. (2016). The Potential Consequence of Using Value-Added Models to Evaluate Teachers. *JEP: EJournal of Education Policy*, 1–12.
- Stegman, J. (2013). *Understanding Your Grade: What does the A-F report card really tell you about the performance of your school*. Retrieved on December 20, 2017 from [http://www.pocola.k12.ok.us/1\\_UnderstandingyourGrade.pdf](http://www.pocola.k12.ok.us/1_UnderstandingyourGrade.pdf)

US Department of Education. (2017). The Federal Role in Education. Retrieved on January 18, 2018 from

<https://www2.ed.gov/about/overview/fed/role.html>

Weir, I. (n.d.). Pearson's correlation: Introduction. Retrieved on December 12, 2017 from <http://www.statstutor.ac.uk/resources/uploaded/pearsons.pdf>.