Grading Our Schools 2000: Third Annual Report to N.C. Parents and Taxpayers is a publication of the N.C. Alliance for Smart Schools. Its purpose is to inform North Carolinians about their public schools and promote debate and discussion about the future of education reform. It is not intended to advance or impede legislation before local, state, or federal lawmaking bodies.

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The N.C. Alliance for Smart Schools is a special project of the John Locke Foundation, a nonprofit, nonpartisan research institute based in North Carolina.

Grading Our Schools 2000

Third Annual Report to North Carolina Parents and Taxpayers

North Carolinians deserve a complete and accurate picture of how their public schools are doing relative to rigorous national and international academic standards. The state's current accountability system, the ABCs of Public Education, is a good first step but needs improvement to increase the reliability and usefulness of information provided to parents and taxpayers.

North Carolina and the World

The United States ranks low on recent international tests of math and science, even for our most advanced students. If North Carolina were a country, its math scores would be below those of most European and Asian countries and above only those of developing countries. Nor is international performance related to spending; of major countries with both recent fiscal data and test scores, the U.S. is first in spending but last in achievement.

North Carolina and the Nation

Despite recent progress on some national standardized tests, North Carolina still lags behind in tests of how well it prepares high school students for college. The state hasn't improved its national reading scores since 1994, even as its math scores have shown significant gains. Overall, North Carolina ranks 34th out of 43 states in National Assessment of Education Progress (NAEP) results during the 1990s. About 40 to 50 percent of our students lack even basic skills, depending on the grade and subject being tested. The results are far worse for N.C. black students — two-thirds of whom lack basic skills in reading and math on rigorous national tests.

A Guide to the ABCs Program

Scores on state-only tests have shown improvement in recent years, with nearly 70 percent of elementary and middle-school students and 62 percent of high-school students meeting grade-level expectations in 1999-2000. Still, there is room for doubt as to the meaning of the tests, nor do they consistently square with the results of other assessments. Furthermore, progress levelled off in 1999-2000. Standards should be raised and more heavily emphasize basic skills such as spelling, grammar, and computation, preferably with an independent test.

Another Way to Grade Schools

An alternative approach to school accountability in North Carolina would be to use state tests, the SAT, and graduation rates to assign accurate, easy-to-understand letter grades for each district in North Carolina. Such a system in 1999-2000 would give N.C. districts overall a D+, with six districts receiving Bs and more than half Ds and Fs. Separate rankings of cost-effectiveness and the performance of districts with high percentages of needy students offer educators and policymakers the opportunity to study best practices in public education.

School Choice in North Carolina

Enrollment in private, charter, and home schools roughly doubled from 1994 to 2000. Encouraging parental choice through means-tested scholarships and educational tax relief would cost taxpayers little because of the savings generated within the public school system, yet dramatically improve educational opportunity.

New Studies on Improving Outcomes

New reports from Harvard University, the RAND Corporation, and the Manhattan Institute suggest that North Carolina has squandered money in recent years on initiatives such as raising average teacher pay. Future state efforts should concentrate on reducing class size in kindergarten, improving teacher quality through performance pay, and providing private-school scholarships for poor students and those in low-performing schools.

Introduction

An Annual Report to N.C. Parents and Taxpayers

In November, North Carolinians will vote for new leaders at the federal, state, and local levels of government. No issue will matter more to them as they go to the polls than education. No issue should matter more. In the midst of nearly unprecedented growth in incomes and economic opportunities, our children are not yet learning what they need to learn to be productive workers and, more importantly, good citizens. There is some progress to cheer, of course. But there remains a long way to go. And recent signs point to the fact that the pace of school improvement in our state is slowing. Much of the immediate gains to be had from past reforms, including student testing and accountability incentives, may have already been realized. The new generation of leaders voters will select this fall will need to think "outside the box" to quicken the pace of progress.

Grading Our Schools 2000: A Third Annual Report to Parents and Taxpayers is the only report of its kind that provides North Carolinians with a thorough, independent analysis of all existing measures of public school performance. Unlike reports comparing North Carolina only to itself, this report gives citizens a national and international context for measuring educational achievement plus a detailed view of local school districts. Space limitations and a lack of timely data prevent comparisons at the individual school level, which is the most meaningful unit of measurement. However, state test scores for individual schools are available on the Department of Public Instruction's website (www.dpi.state.nc.us).

This year's report has been updated with new data and information and contains a new section outlining the results of recent studies on education reform options. Every effort has been made to incorporate suggestions and answers to comments about previous reports from state officials, superintendents, teachers, and others. Again, we must right off the bat make it clear that our suggestions for improving North Carolina's accountability program, the ABCs of Public Education, should not be interpreted as opposition to the program. We recognize the positive contribution of the ABC program and the importance of measuring education achievement through standardized tests. But any top-down accountability model based on test scores, no matter how well designed, misses an important aspect of accountability that cannot be easily measured. That is, are parents satisfied with the quality of education their children receive? And do parents and taxpayers have the necessary information with which to hold schools accountable for results?

Measuring results is crucial to the success of any organization. The customers of public education — parents, employers and taxpayers — must clearly understand how to measure the value of the education received by the children of North Carolina. They need the tools to become consumers of education and hold schools accountable for performance. But measurement is only a starting point. By itself, it will not create meaningful and lasting change and improvement.

There are two approaches to measurement. One is to interpret everything in light of positive accomplishment, to pat ourselves on the back and justify incremental and status quo improvement. The other is to be honest about our shortcomings and failures, challenge ourselves to levels of improvement that may seem unattainable today and then seek to reach a much higher goal. This latter approach is the only way North Carolina can ever achieve Gov. Jim Hunt's goal of making the state number one in education by 2010.

This report acts as an independent audit of our state's educational performance. It is a foundation on which to discuss and debate how North Carolina's educational system must change as we move into the new millennium.

North Carolina and the World

Most Industrialized Countries Outperform Us — And Spend Less

North Carolina's children must be prepared to read, write, and compute with the best in the world. Anything less will impair the economic potential of our state and its people. In a growing global economy driven by information technology, our schools must be competitive. Many North Carolina companies are national and international leaders that understand the opportunity and risk of global competition. Our schools cannot afford to ignore the importance of benchmarking performance with other states and nations.

Reputable international comparisons of student performance in North Carolina, the United States, and other leading industrialized countries reveal serious gaps in knowledge and skills. Chester Finn, former U.S. Assistant Secretary of Education, wrote in 1998 that, "If U.S. schools were a business, they would be in serious competitive peril and probably headed for bankruptcy."[1]

International Mathematics and Science

The largest and most comprehensive study of global education ever conducted is the Third International Mathematics and Science Study (TIMSS), released in 1997. U.S. 4th grade students ranked among the world's best in math and science. Our 8th graders scored above average in science but below average in math. Most troubling, however, is the fact that American high school seniors ranked 16th in science and 19th in math out of 21 participating nations.[2] In other words, the longer our children are in school, the further they fall behind.

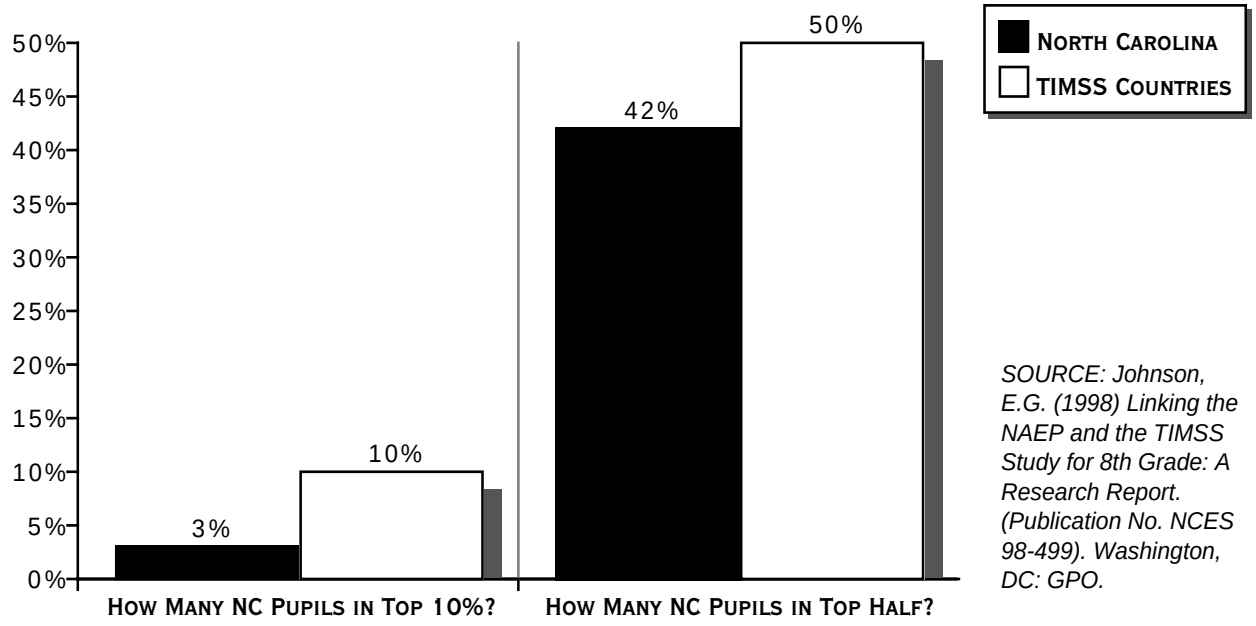
Other studies reveal similar results. The Thomas B. Fordham Foundation reported last year, in a study conducted by one of the nation's leading experts on international education evaluation, that U.S. schools are the least productive in the world. The report found that our schools make the smallest year-to-year gains in academic achievement among comparable countries, ranking last in four of five comparisons of achievement progress. In reading, for example, U.S. students between the ages of 9 and 14 made the lowest gains of 16 countries studied. On average, we make just 78 percent of the progress of our foreign counterparts.[3]

North Carolina is at a serious disadvantage with our global competitors. Projecting the 8th grade TIMSS results by state, the U.S. Department of Education reports that North Carolina ranks close to the bottom in the world in 8th grade mathematics. Our state finished significantly behind countries such as Japan, Korea and most Asian countries, France, Canada, Australia, the Netherlands, Russia and most Eastern European countries. We finished ahead of only a few countries such as Columbia, Iran, Portugal and South Africa. North Carolina fared better in 8th grade science, close to the average of most other countries.[4]

Some observers disputed the validity of the highly respected TIMMS, arguing that the performance of the U.S. and North Carolina is not as low as the test made it out to be. Their observation that some countries separate students into different academic tracks before high school led them to an assumption that a broad segment of U.S. students took the TIMMS tests compared with only a narrow group of top students in other countries. This assumption is absolutely false. In fact, the U.S. Department of Education clearly states that "our general population is not being compared to more select groups in other countries."[5]

Comparisons of the best American and North Carolina students with their international counterparts show that we are not among the world's best. As part of TIMMS, a sample of the top 10-20 percent of students in 16 countries took advanced math and physics tests. The U.S. students finished last in physics and next to last in

Comparing Top N.C. Students to the World in Math



SOURCE: Johnson, E.G. (1998) Linking the NAEP and the TIMSS Study for 8th Grade: A Research Report. (Publication No. NCES 98-499). Washington, DC: GPO.

math.[6] Only 5 percent of U.S. 8th graders placed among the top 10 percent in the world, compared to 34 percent of South Koreans and 32 percent of Japanese.[7] Just 3 percent of North Carolina 8th graders rank among the world's top 10 percent in math, with 10 percent of our students ranking among the world's top 10 percent in science (see above).[8]

As further evidence of low American standards, a TIMMS analysis by the U.S. Department of Education said: "The content of the mathematics general knowledge assessment represented about a seventh-grade level of curriculum for most TIMMS nations, but was most equivalent to the ninth-grade curriculum in the United States. The science general knowledge content was most equivalent to ninth-grade curriculum internationally, and to eleventh-grade curriculum in the United States."[9]

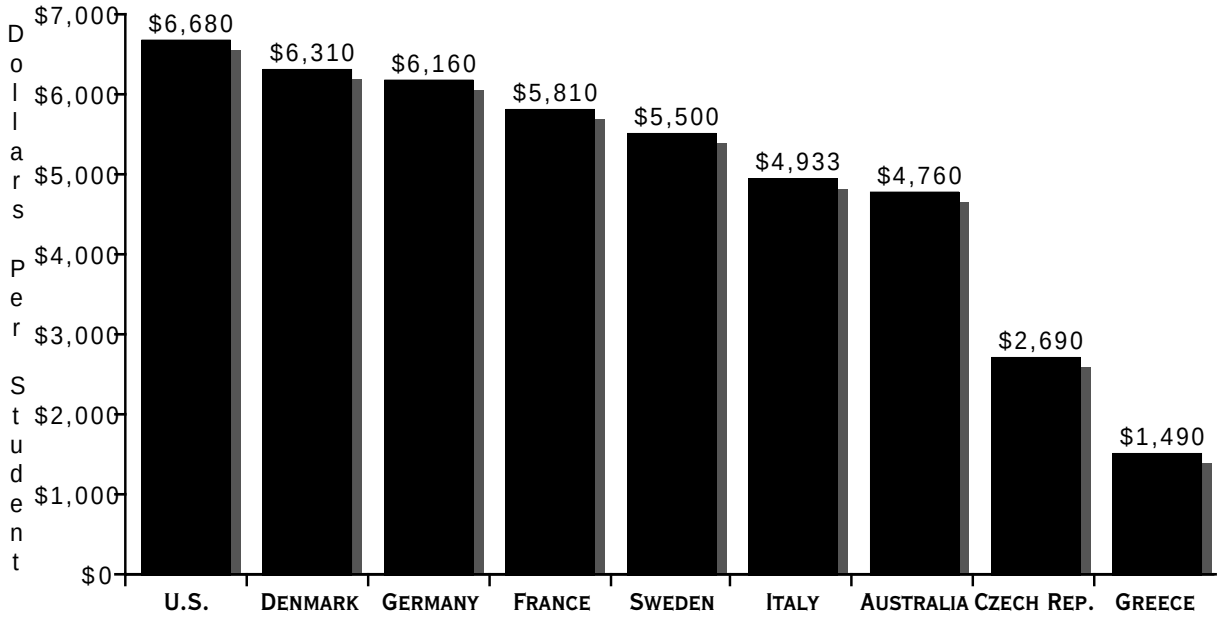
It is clear that overall per-pupil funding is not the answer. America spends more money per citizen on public schools than any country except Finland.[10] Our primary schools spend more per pupil than every industrialized country in the world except Switzerland, and our secondary school per-pupil spending is one of the highest in the world.[11] As the two graphs on the next page reveal, of the major countries where both per-pupil spending data and TIMSS scores are available, the United States ranks first in spending but last in performance.

We are also the only country in the world where a majority of all education workers are non-teachers. In Japan, France, Belgium and Australia, teachers make up 80 percent of the public school workforce.[12] In North Carolina, by contrast, only 52 percent of all public school employees are teachers.[13]

The magnitude of the education gap between the U.S. and other countries is lost on our students, who apparently have learned more about self-esteem than mathematics. In a major international study, 86 percent of U.S. 8th graders said they usually perform well in math. A majority of students in Japan, Hong Kong and Korea said they usually do not perform well, yet they scored significantly higher than U.S. students on the same test.[14]

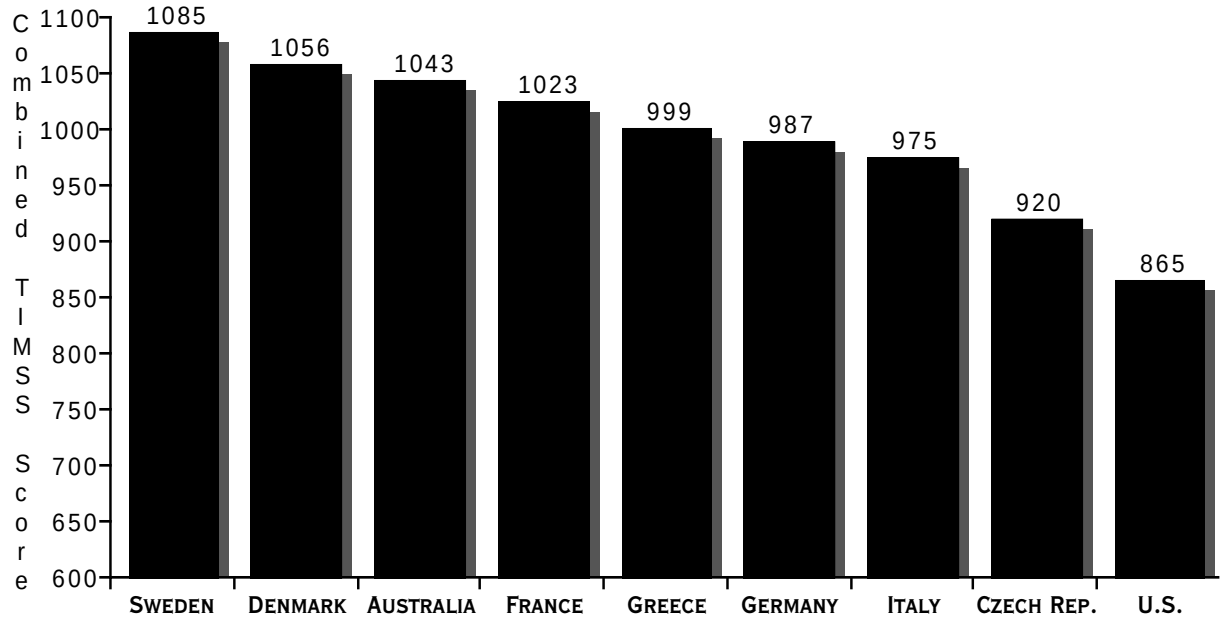
Secondary Spending for Major Western Nations . . .

SOURCE: OECD, 1994



. . . vs. Scores of Advanced Math, Physics Seniors

SOURCE: U.S. Dept. of Education, 1998



North Carolina and the Nation

State Performance Nears National Average in Some Areas but Lags in Others

North Carolina's standardized tests are created by state government and provide no comparison with other states or nations. There are, however, several measures that can be used to compare our schools with those of other states. This report contains several of these measures, including national standardized tests of reading, math, and college preparation.

National Assessment of Educational Progress (NAEP)

The most respected measure is the National Assessment of Educational Progress (NAEP), a rigorous series of knowledge and skills tests developed and administered by an independent, nonpartisan governing board. NAEP was created by Congress in 1969 and began including voluntary state-level tests in 1990 in reading, mathematics and a few other subjects. Generally, NAEP tests are given in each major subject once every four years.

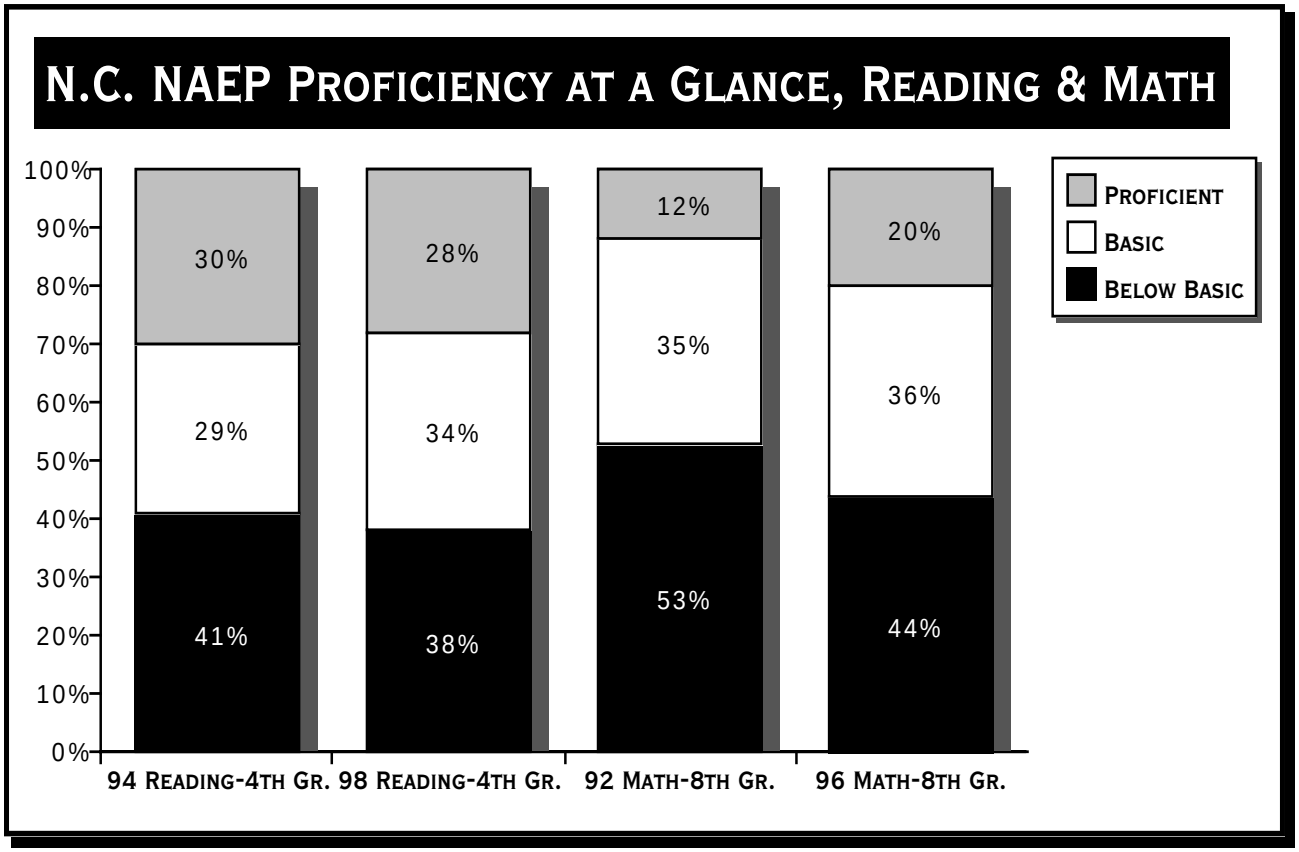
The NAEP achievement standards are high enough, *Education Week* magazine reported in 1997, that if letter grades were assigned, every state would fail because proficiency results were so low.[15] Given our ranking in international assessments, the NAEP standards seem much more realistic than the state's own performance scale. State education officials have publicly cited NAEP as the best independent measure of North Carolina's academic progress.[16]

In recent years, they have used NAEP data to justify their position that North Carolina is making adequate progress in educational achievement. However, a more detailed analysis reveals a different trend than the one often portrayed. The truth is, when state officials tout our national leadership in education progress, they don't tell the whole story.

A study for the National Education Goals Panel in 1997 confirmed that North Carolina and Texas achieved the nation's largest percentage gains on the greatest number of NAEP indicators between 1990 and 1996.[17] In North Carolina, the largest part of this increase came from the nation's largest gain in 8th grade math scores. This was definitely a positive accomplishment. However, it must be kept in perspective. A recent survey of NAEP scores during the same period by the RAND Corporation ranked North Carolina 34th out of 43 states.[18] North Carolina does rank above the national average in math, but proficiency was extremely low with only 1 of every 5 students, or 20 percent, scoring "proficient" and a shocking 44 percent lacking even basic math skills.[19]

Reading results on the NAEP test are a perfect example of how test data can be used for political purposes. Until 1998, state officials made great mention of a gain in reading proficiency from 1992 to 1994. When the 1998 NAEP reading results were reported earlier this year, the media reported what they were told: "North Carolina was one of only five states that had significant gains in 4th grade reading skills from 1992 to 1998."[20] The governor said this was proof that "North Carolina's schools are making dramatic progress."[21] What went unsaid and unreported was that, after an increase from 1992 to 1994, reading proficiency for North Carolina 4th graders on the NAEP test actually declined from 30 percent to 28 percent between 1994 and 1998.[22] North Carolina's average fourth-grade reading score rose only the equivalent of 0.6 points on a 100-point scale.[23]

Compounding this result was the discovery that the number of North Carolina students excluded from taking the NAEP test rose by more than 100 percent from 1994 to 1998. In fact, the percentage of our students randomly



selected to take the test, and then excluded from it, increased from 5 percent in 1994 to 11 percent in 1998 — tying North Carolina with South Carolina for the third highest number of NAEP exclusions in the nation.[24]

How did this affect North Carolina's score? A 1999 analysis by the Smart Schools Alliance found the extra exclusions probably added at least 0.5 percentage points to the reading score, meaning there was no real gain. The U.S. Department of Education expressed concern about the exclusions and vowed to modify its procedures for the next round of tests. Even though they declined to recalculate the state's score, federal officials acknowledged that any adjustment likely would not alter the fact that North Carolina's score was statistically unchanged from 1994.[25] In other words, there was no reading progress in North Carolina from 1994 to 1998.

In 8th-grade reading, 31 percent of our students were proficient in 1998.[26] State officials said 8th grade results had surpassed the national and regional averages as though that were news. But it was the first time the test was given in the 8th grade. In science, our 8th-graders scored behind 23 other states in 1996, slightly below the national average.[27]

As part of the NAEP 4th grade reading test, results within the state were broken down in three regions: central city, urban fringe/large town, and rural/small town (categories set by NAEP). Average scores increased slightly in each region, with the largest increase in the suburbs and large towns. However, proficiency levels dropped in the central city and rural/small town regions while showing only a slight gain in the urban fringe/large town region. This seems to indicate that, at least in reading, there is a greater problem in central cities and rural regions.[28]

State officials downplay the importance of NAEP's proficiency scores, saying the NAEP standards are unrealistically high. However, a separate measure calls that excuse into question. The 1998 NAEP reading test also was given to a sample of private school students in North Carolina. In 4th grade, 42 percent of North Carolina private

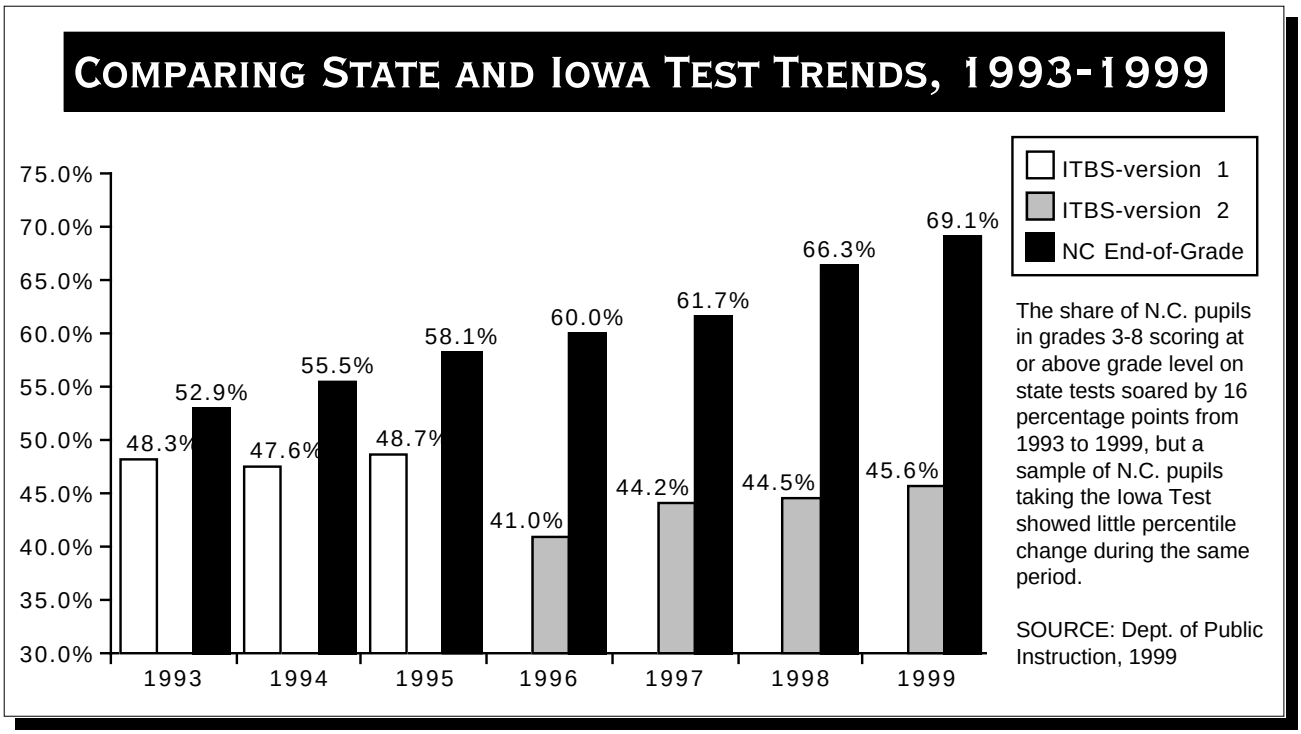
school students rated proficient in reading compared to only 28 percent of students in public school. Of more concern is that the gap was twice as large in 8th grade. A majority — 61 percent — of our 8th grade private school students rated proficient on NAEP compared to 31 percent of their public school counterparts. The John Locke Foundation has argued that a reasonable goal on the NAEP would be for at least half of all students to show proficiency and at least 90 percent show basic skills. North Carolina's private schools already approach or meet this goal.[29]

Iowa Test of Basic Skills (ITBS)

Another respected national standardized test, the Iowa Test of Basic Skills, is given each year to a statistically valid sample of North Carolina 5th and 8th grade students. It is required by state law to provide an independent measure of educational progress, and like the NAEP it shows far less average progress than does the state's own testing program.

The ITBS, unlike the state's tests, was developed by a professional testing company based on a review of the nation's leading academic standards, the most widely used textbooks and the NAEP standards. It is not tied to a specific curriculum, provides much more detailed skill comparisons with students nationally and can even provide international comparisons. The ITBS is widely used by private schools, charter schools, and several entire states, including Iowa and Georgia. It compares students to a national average and shows the grade-level equivalent for each student.

Between April 1998 and April 1999, North Carolina 8th graders showed a very small increase on the ITBS and 5th graders a slight decline in combined reading, language and mathematics scores. Consistent with NAEP trends, the ITBS results for the most recent year show an increase in math and virtually no increase in reading or language. More importantly, combined reading, math, and writing performance on the ITBS has been relatively flat for the past few years even as performance on the state end-of-grade tests in these subjects has soared (see graph below). According to the ITBS, our students continue to rank below the national average in reading, language and combined scores, but ranks above the national average in math scores.[30]



Scholastic Assessment Test (SAT)

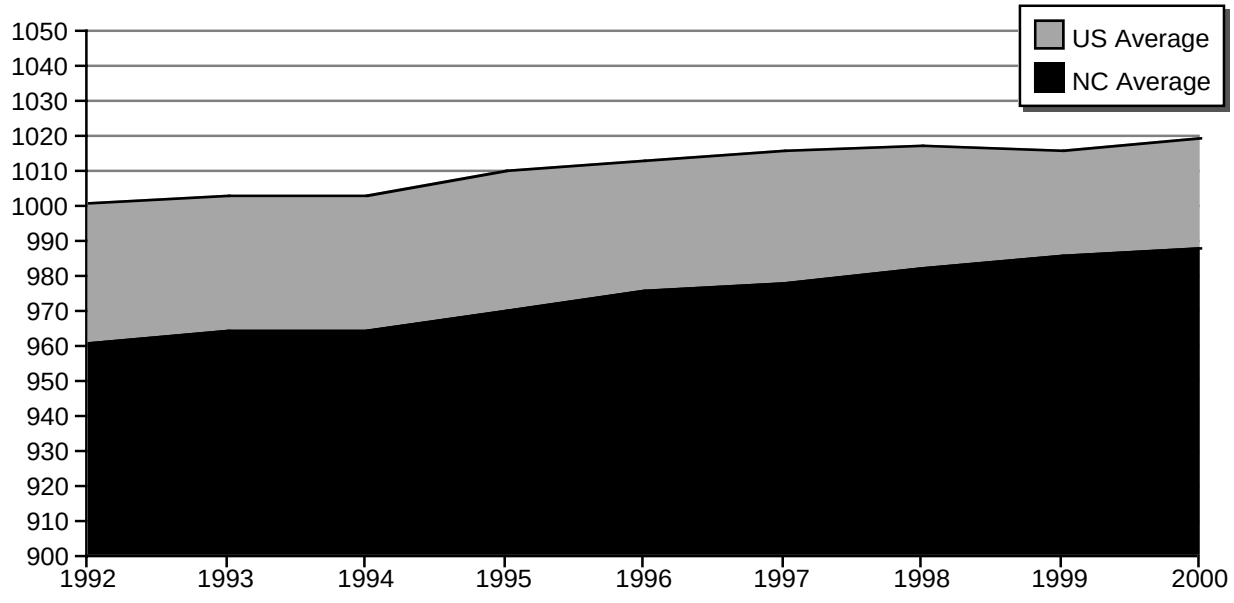
This test, formerly called the Scholastic Aptitude Test, has been the traditional measure used by most North Carolinians to compare performance with other states. The SAT is a nationally recognized independent test taken by high school seniors planning to attend college.

Historically, North Carolina has ranked very low in average SAT scores. In the most recent school year, 1999-2000, the state improved its performance by two points but still ranked 48th among the 50 states and the District of Columbia in absolute achievement.[31] North Carolina students averaged a 492 on the verbal part and 496 on the math part of the test for a total of 988. The national average score in 2000 was 1019.[32]

Over the last 25 years, the state has cut by more than half the gap between our statewide SAT score and the national average, partly because of a dramatic drop in national scores. The average SAT score of North Carolina's graduating seniors has improved 40 points in the last 10 years. Only five states posted large point gains during the decade.[33] Yet the fact remains that most other states are improving, thus shifting the goal post. In 2000, the U.S. average actually grew faster, by a point, than North Carolina's, so the gap widened slightly. Moreover, as with the NAEP and the ITBS, North Carolina's academic progress is most evident in math. Average math scores for N.C. students rose by 29 points from 1972 to 2000. Yet reading scores, averaging 489 in 1972, sagged for most of the period and ended up little changed at 492 in 2000.[34]

Some observers say the SAT should not be used to compare states, although it is a reliable measure used by many major colleges and universities to determine how incoming students will perform. The SAT is not a general measure of academic achievement, but it is a useful way of gauging how well states prepare students for college.

Average SAT Scores for the US, North Carolina: 1992-2000



	1992	1993	1994	1995	1996	1997	1998	1999	2000
US Average	1001	1003	1003	1010	1013	1016	1017	1016	1019
NC Average	961	964	964	970	976	978	982	986	988

Source: SAT Report: The North Carolina 2000 Scholastic Assessment Test Report, *NCDPI, August 2000*

Educators often criticize reports of North Carolina's 48th ranking, saying it is not a fair measure since more than 60 percent of our seniors take the test (a far higher percentage than in many states). "Generally, the higher the percentage of students taking the test, the lower the average scores," said State Superintendent Mike Ward.[35] If this were actually the reason for North Carolina's low SAT ranking, then the state should rank high on the ACT (another respected national test similar to the SAT that is also used by many major colleges and universities outside of North Carolina). Just 13 percent of our seniors took the ACT test in 1999-2000, but the state ranked 47th among all states with a score of 19.5.[36]

When comparing North Carolina to all states where at least half of seniors take the SAT, North Carolina ranks 20th out of 23.[37] One of the most thorough studies of SAT performance conducted in recent years by two noted experts found that, after statistically adjusting for the number of students taking the test so that all states could be compared equally, North Carolina still ranked 45th in the nation.[38] The study was even more revealing because it also included adjustments for income and race, sometimes used as excuses for low performance by critics of the SAT. Another group, the Southern Regional Education Board, reported last year that North Carolina should rank about 40th.[39]

Whatever the method of analysis, North Carolina still ranks among the worst states in preparing college-bound students as measured by one of the most respected and long-running independent tests.

North Carolinians should note that, giving in to pressure from critics, the SAT test and scoring were changed significantly in 1995. The new test is easier, with fewer questions, longer reading passages, fewer multiple-choice math questions and an additional 30 minutes of time to take the test. Calculators are now allowed, and a perfect score of 1600 can be achieved by missing up to four questions instead of the previous zero. In addition, the scores were "re-centered," or re-calibrated, to eliminate a growing gap between verbal and math scores.[40] This means the scale center for the verbal score of the old Scholastic Aptitude Test, which was 428, was changed to 504 automatically on the new Scholastic Assessment Test. The math center was raised 24 points to 506, and all scores from previous years were recalculated to reflect the new scale.[41]

Advanced Placement (AP) Tests

Our state also ranks below the national average on Advanced Placement tests. These independent tests are given by the College Board in a variety of subjects to what should be assumed to be our brightest college-bound high school seniors to give them an opportunity to receive college credits by demonstrating existing knowledge in the subject matter. Our statewide AP average was 2.83 in 1998 (the most recent year available) compared to the national average of 3.02 on a five-point scale. Our state's best high school seniors consistently ranked below the national average in critical subjects such as chemistry, calculus, biology, physics, U.S. history, and English literature and composition.[42]

Another way to examine our AP performance is to look at the percentage of test-takers who score at least a 3 — which is typically the minimum required to receive college credit. In 1999, 62 percent of students nationally scored a 3 or better on AP exams, compared to 54 percent of N.C. students. More troubling was that most North Carolinians who took AP exams in U.S. history, biology, chemistry, and physics did not get the required score.[43]

Conclusion

In short, North Carolina's performance on independent national evaluations of reading, math, science, and college preparation does not quite justify the exuberance exhibited by some state officials. While the state has made impressive gains on some tests, it has remained in the cellar on others. Furthermore, reaching the national average in a country — the United States — where mediocrity is the rule rather than excellence is not an achievement justifying much celebration. The bar should be, and can be, set higher than that.

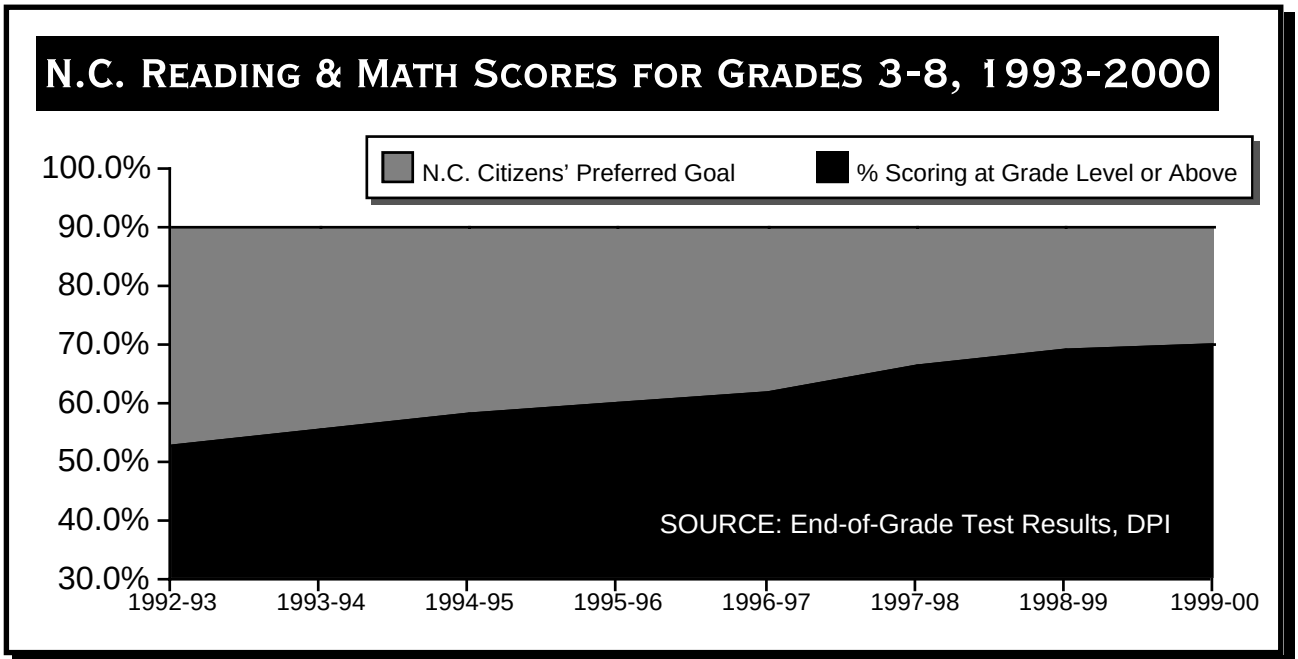
A Guide to the ABCs Program

State Tests Show Progress, But Achievement Standards Are Set Too Low

A fair reading of national and international data yields a mixed bag for North Carolina public schools. Clearly, there has been significant progress in recent years in the area of mathematics. Reading and language scores have not improved at a similar rate, or at all on some measures. In relative terms, our schools aren't the worst in the nation, and are approaching the national average in some areas. But the overall level of student achievement remains unsatisfactory. The academic preparation of our college-bound students has also improved, but still ranks low by national standards.

The "ABCs of Public Education," the linchpin of North Carolina's accountability system for public schools, represents another body of evidence with which parents and taxpayers can judge student performance. It provides much useful information. However, the end-of-grade (EOG) and end-of-course (EOC) tests that form the basis of the ABCs program portray the performance of North Carolina public schools at a higher level than what independent tests reveal. Until the 1999-2000 academic year, state test scores steadily climbed even when some national test scores for N.C. students did not.

As the graph below reveals, this year was the first since the institution of state EOG tests in the early 1990s in which elementary and middle school students failed to make significant progress in meeting grade-level expectations. Whether this "levelling off" trend is temporary or a sign of trouble ahead remains to be seen. Still, it is worth repeating that, according to the most recent ITBS scores, North Carolina students remain below the national average in combined scores for reading, language, and math. Yet nearly 70 percent are simultaneously "at or above grade level" on tests designed and administered by the state.[44] Either the students taking the ITBS are



	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
N.C. Citizens' Preferred Goal	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
% Scoring at Grade Level or Above	52.9%	55.5%	58.1%	60.0%	61.7%	66.3%	69.1%	69.8%

unrepresentative of the state as a whole — which is unlikely — or the state's definition of what constitutes being at "grade level" are far too low.

Still, the fact remains that the ABCs program provides the most up-to-date, comprehensive, and detailed data available on outcomes in North Carolina public education, and are used extensively in the district grades published in this report. Morever, North Carolina's accountability system, as separate from the design and scoring of state tests, offers much to praise. The introduction of statewide curriculum standards and regular testing in the early 1990s no doubt played a critical role in subsequent improvement in NAEP scores, particularly in math. The state's Standard Course of Study, with a few important exceptions, provides a solid foundation for improvement. The well-respected Thomas Fordham Foundation ranked North Carolina's academic standards in early 2000 as 6th best in the country, exceeded only by those of California, Arizona, South Carolina, Texas, and Alabama.[45]

Another reason to use state test scores is that, while they overstate student performance vs. national or objective standards of proficiency, they still provide sobering news about many North Carolina public schools. For example, if we use a 10-point grading scale to assign traditional letter grades to individual schools based on the percentage of students at grade level on state tests, 40 percent of the state's public schools would receive D's or F's this year, while only 78 schools — or 4 percent — would merit an A and 24 percent a B. The state's overall grade would be a D+. Even these numbers reflect some improvement, however. In 1997-98, only 1 percent of public schools earned an A and 15 percent a B, while half got D's or F's.[46]

Such an approach is consistent with what the public demands of its schools. A 1998 poll found that 65 percent of state citizens supported a standard of at least 90 percent of students "reading and writing at grade level for a school to be considered successful."[47] Some districts understand the importance of setting such high standards. Wake County, for example, has set a goal to have 95 percent of all children proficient by 2003.[48]

The Minority Achievement Crisis

State education leaders continue to grapple with the extraordinarily high number of minority students who are below grade level in North Carolina's public schools. Increasingly, black parents and community leaders have begun to question what is happening to their children, especially in light of new standards restricting social promotion.[49] The magnitude of this problem is such that all North Carolinians should be deeply concerned.

The more rigorous NAEP tests in reading and math paint a stark picture of the racial gaps that remain in North Carolina student achievement (see the graph on the next page). On the 1998 NAEP reading test, just 11 percent of North Carolina's black 4th graders were proficient compared to 28 percent of all students. This percentage is unchanged from 1994, although the average score of black students on the NAEP test increased more than white students (a score that may have been influenced by the large rise in test exemptions).[50] Only 5 percent of black 8th graders were proficient on the NAEP math test.[51]

The gap is wide on state tests, as well, although all socioeconomic groups look a bit better. In 1999-2000, 49 percent of black students performed at grade level on reading and math tests in elementary and middle school, compared with 80 percent of white students. Indians and Hispanics fell in between at 56 percent and 57 percent respectively.[52] The gap persists in high school, with just 38 percent of black students scoring proficient in core subjects compared with 70 percent of whites, 41 percent of Indians, and 50 percent of Hispanics. Black students scored considerably lower than the state average in biology (31 percent), geometry (30 percent), and U.S. history (29 percent).[53] On the SAT in 1999-2000, North Carolina black students scored two points lower than last year, with an average of 835, compared to a white student average of 1035, up four points. From 1997 to 2000, the white-black gap on the SAT widened from 189 points to 200 points.[54]

Many in education use the performance of minority students as an excuse for poor overall achievement in school districts and states with higher minority populations. However, most studies have found these children often

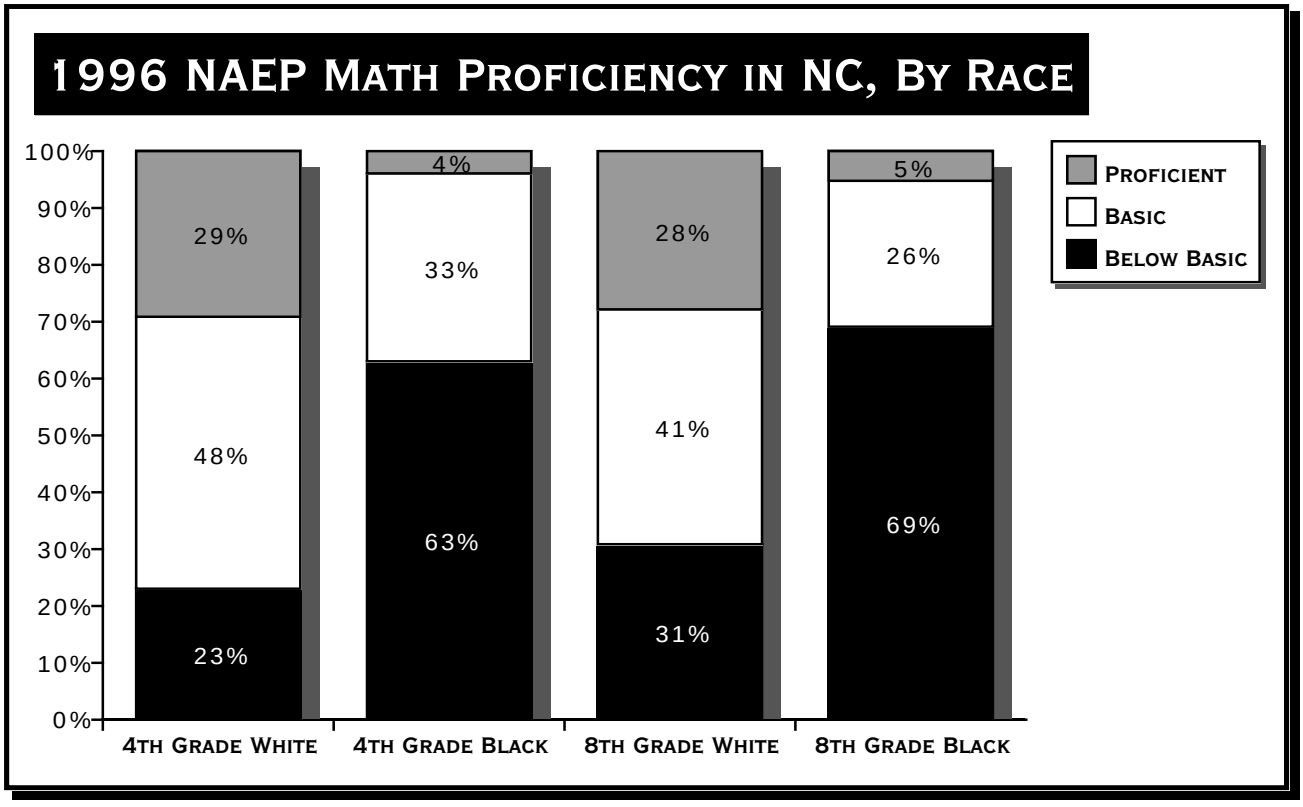
suffer from low expectations, bad teachers, bad curriculum, improper instructional grouping, poorly maintained facilities and stigmatizing labels. There is now comprehensive evidence proving that race and socioeconomic status do not directly determine a child's will or capacity to learn.[55] There is other widespread evidence showing that only a handful of curriculum and instructional strategies actually work with children from disadvantaged and poorly educated families, yet most are not used in North Carolina public schools.[56]

The racial divide in education has far-reaching ramifications for all North Carolinians, especially minority children and their families. They are being deprived of their constitutional right to a "sound, basic education." It is time to give high priority to strategies that will rapidly close this gap.

The ABCs Program: Problems and Opportunities

ABC is an acronym in which "A" stands for "Accountability," "B" stands for an emphasis on teaching "Basic" subjects, and "C" stands for increased local "Control." The EOG and EOC tests used to measure student achievement each year are sometimes called "ABC tests," but the ABCs program is far more than a testing program.

It is a comprehensive accountability system that emphasizes statewide standards and achievement in the basic subjects of reading, writing and math. It expects that each child should show one year's academic growth for one year of schooling. It requires a written school improvement plan for each school and a school improvement team that should include leadership, parent and teachers. It measures achievement at the school (rather than district) level and requires the results to be released for publication in local newspapers. It recognizes schools achieving their "expected" growth or those exceeding expectations with substantial bonuses for school staff. It frees schools from some state regulations, especially with flexibility in spending money. And it outlines consequences for low performance, including state technical assistance teams and possible school takeover by the state. Additional provisions were added later but dropped after political opposition, including mandatory competency testing for teachers in low-performing schools and suspension or firing of principals at low-performing schools.



All of these are worthwhile and effective provisions. The General Assembly and the late Jay Robinson, former chairman of the State Board of Education, deserve credit for devising and enacting the ABCs program in 1995. Ironically, advocates of parental choice also deserve some credit, since Robinson himself admitted that a major impetus for creating the ABCs program was a fear on the part of state political and education leaders that a failure to act to improve public education would result in "vouchers."[57]

The focus of the ABC plan has raised the stakes for pushing results higher than ever, which is positive. However, politicians and the education establishment have much to gain by justifying their programs and priorities. There are serious questions about whether student knowledge of academic subjects is really growing as much as their skill in taking the state test. Such a strong emphasis on testing puts a great burden on the actual test: how it is developed and written, what content is included and how it is weighted, where proficiency cutoff levels are set and how it is implemented in the classroom. There also are questions about how the state measures academic growth, how it sets growth goals and rewards, and the relationship between growth and absolute achievement.

Some observers use concerns about the state test to question the validity of multiple-choice testing or the emphasis on testing. But, despite its imperfections, there is really no better way to measure student achievement and the value added by a teacher than a multiple-choice test. E.D. Hirsch Jr., respected professor at the University of Virginia and founder of the Core Knowledge school movement, writes in his book *The Schools We Need & Why We Don't Have Them* that such testing is about the only objective means of measuring educational outcomes. The real concern, he says, should be not whether testing is a bad thing but whether the test is of high quality and the implementation process has integrity.[58]

"The practice of teaching to high-stakes, continually reused tests, instead of teaching to the subject, often corrupts education in the schools," Hirsch writes. "It is an abuse of these off-the-shelf tests to rely on them as primary tools of educational reform — a convenient practice that enables policymakers to evade hard decisions about educational goals and strategies."[59]

Testing and Corruption

Time after time in America, testing programs accompanied by great political pressure and incentives have resulted in fraud and scandals that have forced tests and testing processes to be reevaluated and changed. In Kentucky, which began an accountability program similar to North Carolina's before the ABC plan was adopted, a 1998 RAND Corporation study found significant test score inflation when comparing state test results over several years with independent measures like NAEP.[60]

There had been widespread media reports and legislative investigations in Kentucky of allegations of cheating and parental concerns about the state test. Since then, the legislature has changed the entire testing program. It appointed an independent review board of national testing experts that reports directly to the legislature and hired an independent testing company to develop new tests for all grades that will also allow parents to see how students compare with the rest of the nation.[61]

In Texas, independent research has indicated that the content of state tests has been made progressively easier over time. There are reports of unusually high increases in the number of students exempted from taking the test, and there have been a number of indictments of school and district staff found to have manipulated test results.[62] Texas education leaders have recently announced that they are developing entirely new tests that will have a higher level of difficulty.[63] In North Carolina, there is no evidence of such widespread problems. But there are great temptations, and the stakes are high. This year, North Carolina awarded more than $100 million in bonuses to teachers based on the test outcomes.

The EOG and EOC tests were developed by the state in the early 1990s (before the ABC program began) in response to previous excesses. North Carolina had given the exact same version of the California Achievement

Test for seven years in a row.[64] At that time, there were numerous cases of cheating on the test because teachers knew what the test would be. There are now three different versions of the state test, but parents and teachers throughout the state allege that schools are "teaching to the test."

"We spend an absolutely inordinate amount of time teaching to the test," said Richard Belcourt, a 4th grade teacher in Charlotte, in a story in *Education Week* earlier this year.[65] Hirsch says this is typical whenever testing is emphasized more than instruction and when administrators are in charge of developing and administering the testing process. "Such fragmented and irresponsible teaching is practiced, and it does enable unskilled students to appear more skilled (and teachers and administrators more competent) than they really are," he writes.[66]

Education leaders say it's okay if teachers are "teaching to the test" because the tests are based on North Carolina's approved education standards, which they want teachers to teach. But a review of the testing process shows it is more likely that Hirsch is right. Tests should be snapshots of overall learning. They can cover only a small percentage of the material that students need to know.

If teachers and administrators have a general idea of the topics the test may cover and the way questions might be asked, it is easy to focus only on teaching material considered relevant for the test rather than the broader knowledge that should be taught. At least one recent version of the test is released for "practice" use in North Carolina schools every year.[67] Many school districts have purchased special programs that are integrated into regular classroom instruction to familiarize students with process and methodology of North Carolina's test. There are stories of seminars on how to align curriculum, not just to standards, but to the test. And many teachers complain of the pressure put on them to literally teach as closely to the test as possible throughout the year.

Origin of the State Tests

In North Carolina, the EOG and EOC tests were not developed or written by professionals from an independent, outside testing company. The process was designed and overseen by the North Carolina Department of Public Instruction. Test questions were written by North Carolina teachers, the same people who stand to benefit financially from the test results. Teachers were selected to write and review test items when the tests were first developed in the early 1990s (and others are being recruited to write items for new versions of the tests). The criteria for selecting teachers included geographic location, race, gender and years of experience — not whether they were testing experts or uniquely knowledgeable in their academic field. They received training sessions, a videotape, and a booklet prepared by the state on "how to write multiple choice test items." State officials reviewed the test questions submitted by teachers, made selections and tested them in practice "field-testing" in 1992.[68] In addition, school districts grade their own tests, using scoring equipment most of them have purchased.

One important issue is the actual content of the test. Security concerns do not permit anyone to review or analyze existing copies of the tests. But a description of the testing process explains that the underlying philosophy of the EOG and EOC tests follows one of the most widely held and disputed fads of the educational establishment: a focus on "higher order thinking skills" rather than a grounding in factual core knowledge.[69] "In addition to being asked how to solve problems," says the state's official description of the tests, "students are asked 'how' to solve a problem or 'what strategy should be used' to solve a problem. Even in reading, students are asked how they determined the correct answer to a given question. Better students are able to take responsibility for their own learning. They develop an awareness of their own thinking, including attitudes, habits and dispositions."[70] With this "student-centered" approach to curriculum and testing where the process is as important or more important than the correct answer, it is no wonder that just 15 percent of elementary school questions and 10 percent of middle school questions cover math computation skills.[71]

As further proof of the influence of liberal education fads and philosophies on the state tests, spelling and grammar are not included in the final numeric score on the 4th and 7th grade writing tests. Instead, the tests focus on "holistic" writing, which emphasizes expression rather than accurate mechanics.

In response to criticism, education leaders often reply that they only test what the state considers important. If this is the case, consider the only writing test question asked of all North Carolina 7th graders in 1999: "Think about your favorite day of the week. Name your favorite day of the week and explain why it is your favorite." When faced with such an insultingly easy question for middle school students, it is not surprising that the percentage of students achieving proficiency exceeded the average for reading and math. Incredibly, 30 percent of the students actually failed the test.[72]

An Easier Scale?

An even larger issue than test content is the cutoff points for achieving proficiency. EOG and EOC test results are often expressed two ways: the average scale score and the percentage at "grade level." The second is actually the percentage of students scoring at Level 3 or higher. (The state tests, like the NAEP, use a system of proficiency rating that includes four achievement levels.) In other words, saying that 70 percent of students were at grade level on state tests in 2000 doesn't mean that they got, on average, 70 percent of the questions correct.

There are at least two ways to set cutoff scores for achievement levels on a multiple-choice test. One way involves an independent group of people, generally considered knowledgeable of the material, who decide what constitutes "grade level" and where levels of achievement should lie. They often include student performance in field testing as a factor in their decisions. The other way to set cutoff scores is to allow teachers to choose them by classifying students in different proficiency levels based on how they score on field tests. The effect is not all that different from "curving" grades since levels are set based on how a given group of students perform.

The NAEP test, generally regarded by most experts as a test of high rigor and integrity, sets its proficiency levels with an independent group of experts. Some question this method, saying the proficiency levels are too high since so many students are not proficient. Yet the advantage of this method is that it assumes that most academic standards are too low and that setting higher standards will raise expectations and instructional rigor.

The state of Virginia began a statewide testing program of its own last year after adopting what are considered some of the nation's toughest academic standards, setting testing proficiency levels with a process similar to NAEP. In 1999, Virginia announced that fewer than 10 percent of the state's 1,800 schools met the requirement of passing all four subjects tested: English (reading and writing), math, science and history. Passing in most subjects is 70 percent. Just 39 schools had passed the tests the first year.[74]

This is not the method used to set achievement levels on North Carolina's tests. When the grades 3-8 tests were first "field-tested" in 1992, every participating teacher classified each student into an achievement level based on personal observations. The combined performance became the benchmark for the four achievement levels.[75] As a result, a review of state test scores reveals that an 8th grade math student can be classified as "proficient" even though she may score the equivalent of 37 percent on the test. Students are reported as proficient, or "at grade level," whether they correctly answer 40 percent or 90 percent of questions on the test, depending on the grade. This percentage is masked by the fact that the state counts actual test performance with developmental scale scores rather than a simple percentage of questions passed. The proficiency score is set at similarly low levels in other grades, with 4th-grade reading proficiency beginning at the equivalent of 42 percent.[76]

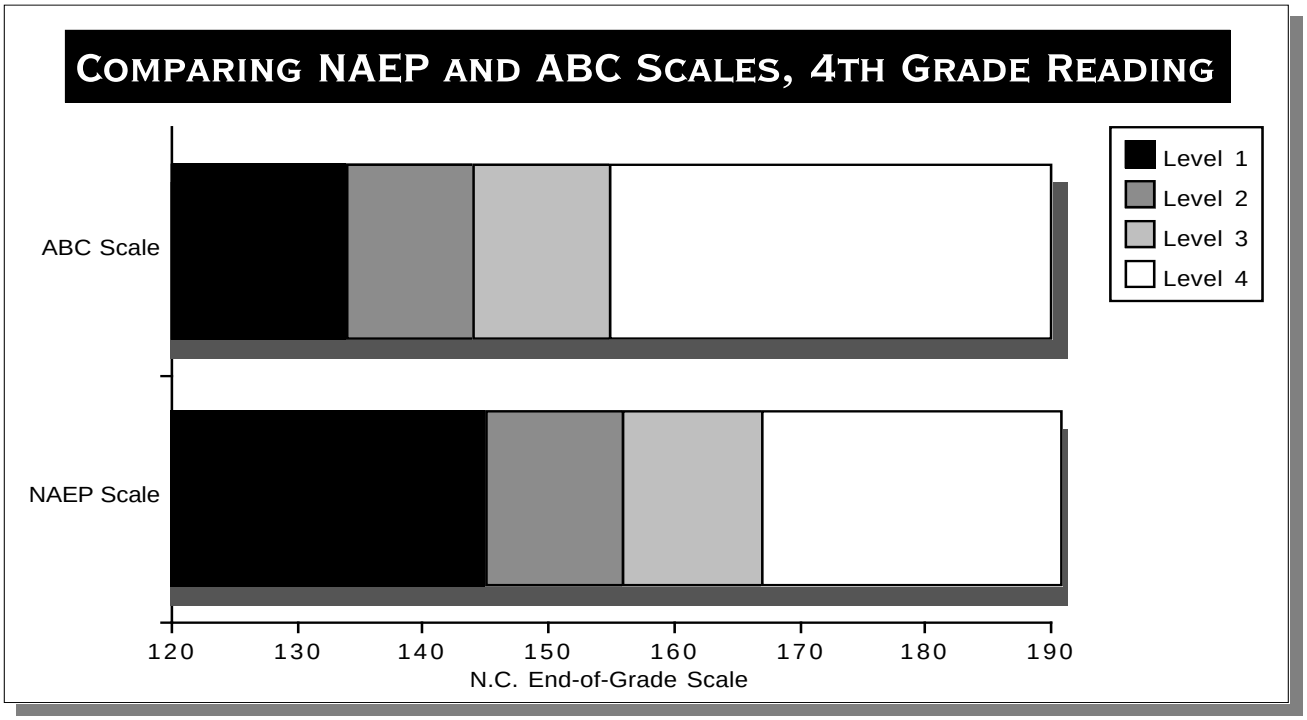
When comparing proficiency levels on the state test with levels on the NAEP test, it is clear that what North Carolina considers "proficient" is approximately equal to "basic" on NAEP. Similarly, students scoring at Level 2 on the ABC test are classified by NAEP has lacking even basic skills (see graph on the next page). This indicates that either North Carolina's tests are poorly written, or cutoff scores are set artificially low, or both. The only possible explanation for maintaining such a system is the fear of public reaction if true scores were reported and the political ramifications that might result. Thus, the public is told that 70 percent of all students are "at grade level" without defining what that really means.

A recent report on standardized tests by the Fordham Foundation put this problem in perspective. "The student's performance (on tests) reflects to some degree on instructional quality, parental support, and so on, but it does not necessarily indicate anything about whether the student is better or worse than average, nor whether the criteria (on the test) represent noteworthy expectations given the student's age or grade level, nor whether the content is challenging or the outcomes measured desirable," the report stated. All it can really measure, then, is whether "the student has performed up to the expectations of those who established the criterion."[77] In other words, the state tests could be consistent with state standards yet be poorly written, too easy or too difficult, and meaningless to tell us anything about whether a student is really learning what he or she needs to know by national or international standards.

Test manipulation to achieve desirable outcomes is not unusual, as Hirsch reports, when the lack of independent test development and oversight leaves the testing process open to potential political manipulation (or at least its perception).[78] This is the very reason why businesses are required to have independent auditors, rather than relying on internal reports alone. A study of state testing programs several years ago revealed similar patterns of testing abuse. The study called the consistent inflation of state test scores the "Lake Wobegon" effect, referring to the fictional village in the famous NPR program in which "all our children are above average."[79]

The Issue of Growth

A central component of the ABCs program is the expectation that children show a year's worth of growth each year. Growth is an important measure of the amount of value schools add to education. We must monitor educational effectiveness and value-added, especially when large numbers of students are below grade level. But, as important as growth is, it is not a substitute for the ultimate goal — getting all students on or above grade level.



By converting NAEP proficiency levels to the scale used by ABC testing, it is clear that NAEP's Level 2, or "Basic," standard is similar to North Carolina's Level 3 standard, while NAEP's Level 3 "Proficient" standard compares to N.C.'s Level 4. The ABC test has no high-level standard comparable to NAEP's "Advanced," or Level 4 category, demonstrating the less rigorous expectations of the North Carolina test.

NOTE: NAEP proficiency levels were converted to the ABC scale by using mean 1998 scores for N.C. 4th graders on each test to create a proportion.

The process of calculating test score growth deserves review and change. Under the current method of reporting test results, the relationship between absolute achievement and value added is often unclear to the public. Based on news coverage influenced by reports from school districts and the state, North Carolinians are led to believe that many or most schools are "exemplary." Yet an analysis of education achievement in a national and international context shows that is not the case.

To be fair, state officials have in the past two years made a special effort to marry ABC labels with the word "growth." "Expected growth" refers to a school that achieves "at least one year's worth of growth." "Exemplary growth" is used to describe a higher percentage of growth, and "low-performing" refers to schools with less than 50 percent of students at grade level that are not meeting expected growth. All other schools receive "no recognition," an improvement from two years ago, when they were called "adequate." Every school is assigned one of these terms based on their academic growth.

How meaningful are these terms? They are quite meaningful for education leaders and politicians to convey a sense of momentum to school performance. But is this momentum real or a product of the way growth is calculated? If the state has so far to go to achieve international excellence, why are growth benchmarks so low that the vast majority of schools are "exemplary" or "expected" and less than 1 percent are "low-performing?" In other words, is the bar to measure growth high enough?

The answer to these questions can be found in the formula by which growth is calculated. There are at least two ways to calculate educational growth as measured by standardized achievement tests. The most sophisticated and scientifically exact method was developed by Dr. William Sanders, a professor at the University of Tennessee and director of its Value-Added Research and Assessment Center. His method, which forms the basis of Tennessee's school accountability model, uses advanced statistical models based on software developed by North Carolina's SAS Institute. It is comparable to advanced database marketing systems used by many businesses, including banks, airlines, newspapers and technology companies.[80]

Backed by the world's largest database of student test records, Sanders' research provides the most comprehensive insight into the factors that affect and do not affect student achievement. His research shows that race, socioeconomic status, class size and spending do not determine a child's ability to learn. He proves the key factor is what happens in the classroom — the effectiveness of the teacher.[81] Sanders' approach is so specific that it can analyze detailed data and trends about individual students over their entire school career while pinpointing and measuring individual teacher performance over time. His system can show the positive lasting effects of just one good teacher while also showing a student will rarely recover from just two or three poor teachers in a row. The power of his system and research is so strong that Sanders is now one of the most sought-after speakers in the nation on the subject of student accountability. Many school districts (including some in North Carolina) and several entire states are adopting or seriously considering the Sanders system.

While the technology is complex, the concept behind the Value-Added approach to measuring academic growth is simple. It measures the actual growth of each individual student from year-to-year. It also allows measures educational value-added at the classroom, school, district and state level. In addition, the system can make national comparisons by using a nationally standardized test as its assessment.[82]

North Carolina's system of measuring growth is far less sophisticated or precise than Tennessee's. It does not measure growth at the individual student level. The best it can do is measure groups of students, like all 4th graders in a school. It does not even measure growth at this level from one year to the next. Nor does it provide the same level of data as Tennessee to principals and superintendents for evaluating teacher performance.

Most state documents about the growth formula say that "expected growth" is growth that meets 100 percent of the student growth standard and that "exemplary growth" meets 110 percent of the student growth standard.[83] This sounds reasonable until you find out the actual student growth standard. "Expected growth" is calculated

with a complicated formula that has used the same statewide average growth number since 1994, two years before the ABC plan was adopted. By basing "expected" and "exemplary" growth on an old growth rate from 1993 to 1994, it is much easier to "manage" growth and exceed growth expectations. For example, the rate of growth in several grades was only 3 points or less on the ABC scale.[84] To achieve "exemplary growth" status, a K-8 school doesn't have to achieve the implied 10 percent increase from its previous year's performance. All it has to do is achieve a growth rate 10 percent above the statewide average growth from 1994. That means schools can receive "exemplary" ratings with growth rates of a little as 0.3 points, or less, above the average growth number. This explains why 45 percent of schools made "exemplary growth" in 2000. Almost twice as many schools received "exemplary" ratings as "expected" ratings. It seems far too easy to be an "exemplary" school. To make matters even more confusing, high school growth rates are calculated differently.[85]

Why does this matter? For one thing, the rating term "exemplary" and method of calculating growth mislead the public. Schools are classified as "low-performing" if fewer than half of their students are at grade level and they didn't meet expected growth. This year, 38 schools with fewer than 50 percent of students at grade level received "exemplary" ratings in the ABC results.[86] Progress of any magnitude is deserving of praise, but attaching the word "exemplary" to schools where most children aren't at grade level (by the state's low standard) is likely to weaken, not strengthen, public confidence in the ABCs program and public education.

The public clearly believes that North Carolina's system of labeling schools lacks credibility. As part of a nationwide research project for *Education Week* on reporting student performance, parents and taxpayers said they strongly preferred traditional letter grades such as "A," "B," or "F" to terms like "exemplary," "expected" or "low-performing." In a large community focus group for the project held in Charlotte, participants overwhelmingly said they did not think two-thirds of the local district's schools were actually "exemplary," as reported by the state. "While they are optimistic that schools can improve, they do not believe that such a high percentage of students, nor the schools they attend, are performing at an exemplary level," *Education Week* reported.[87]

There is another very important reason to be concerned about the formula for calculating growth. Big money is tied to the outcome. This year, the state paid $102 million in ABC bonuses.[88] All teachers at "Exemplary" schools received bonuses of $1,500, and assistants received $500 — regardless of whether some at a school performed well and others didn't.[89] Teachers and assistants at "Expected" schools received smaller bonuses while performing what most businesses consider unworthy of additional compensation — their expected job of delivering one year's progress for one year's work.

Only two other states pay bonuses to teachers, and both were previously mentioned as having highly publicized testing problems.[90] Last year, Texas paid about $2.5 million in bonuses, and Kentucky paid about $27 million.[91] There is nothing wrong with incentive compensation. However, it should be based on individual merit, and the rationale for receiving a bonus should mean something. Clearly, it is too easy to make a bonus in North Carolina. If Texas is achieving greater gains than North Carolina with a fraction of bonus money, the question also must be asked: what effect do these bonuses actually have on performance? Since they have been awarded so freely in combination with record teacher pay increases, it is difficult to tell. As is discussed in a subsequent section, the available evidence suggests that raising teacher pay without a real effort to measure and improve teacher effectiveness is a waste of money.

Conclusion

The ABCs of Public Education provides a great deal of information about how public schools in North Carolina are performing. Compared with other states, North Carolina's efforts to define curriculum standards and hold schools accountable for meeting them are laudable. But problems of test design, the setting of "grade level" expectations, how growth is measured, and how results are reported to the public undermine the program's effectiveness. In a later section, we recommend changes that we think would improve the ABCs approach.

Another Way to Grade Schools

Using Test Scores and Letter Grades Can Provide Public with Clearer Picture

One of the key tasks of a state accountability system is to provide parents, teachers, and the public-at-large with useful information, effectively communicated. The current design of the ABCs approach — by employing a confusing and sometimes misleading array of labels — prevents it from accomplishing this task. The following is another approach that combines state test scores with graduation rates and SATs for each district and uses a "letter-grade" system, as the public itself says it prefers. The formula is as follows:

1. EOG/EOC Proficiency Average for Each School District

We computed a weighted average percentage of students in each district scoring at or above grade level (or passing end-of-course tests in the case of high schools) for the 1999-2000 school year. This percentage was then given a letter grade based on the traditional 10-point scale: 90 percent and up is an A, 80 percent to 89.9 percent is a B, and so on. This score also made up 50 percent of the final composite score for each district. The overall state grade was a D+.

2. EOG Scale Score Averages for Each School District

In response to a suggestion from a public school superintendent, we added last year a grade for districts based on their average ABC scale scores. This reflects a desire to reward school districts that don't just reach grade-level targets but push higher-achieving students to succeed beyond that. Unlike the proficiency scores, scale scores are not reported in a form that makes letter-grading and use in a final composite score easy. So we determined "target" scale scores based on the 1998 reading and 1996 math EOG and NAEP tests for 4th and 8th graders. Using the mean N.C. score for each test, we were able to construct a proportion and estimate (on a converted 100-point scale) what NAEP "proficiency" and "basic" would consist of on the ABC scale. We then set our letter grades based on our past suggestion that the state set a goal that half of our students should be proficient and 90 percent have basic skills on the NAEP. The result was a 100-point scale for 4th and 8th grades that was used to assign a letter grade and to make up 20 percent of the final composite score for each school district.

3. Graduation Rates for Each School District

The graduation rate is the percentage of freshmen who graduate high school in four years. As in previous years, we assigned letter grades somewhat on a curve, because a serious attempt to raise standards might reduce the graduation rate in the short term. The rate was adjusted to reflect a 10 percent lower target than 90 percent for an "A," and so on. It makes up 20 percent of the total composite score. The overall state grade was a D+.

4. Average SAT Scores for Each School District

The SAT remains a reasonably good indicator of how well a particular student is prepared for college work. By implication, it serves as a guide for how well a school prepares its college-bound students. For our purposes, average SAT scores had to be converted to a 100-point scale for letter-grading and inclusion in the composite. This was accomplished by setting as the "A" cutoff the average score for incoming freshmen in the top half of the universities in the UNC system in 1998. An "A" district prepared its average college-bound student to attend North Carolina's more-competitive state universities. Similarly, an "F' district prepared its average student to attend the least-competitive UNC schools. The resulting scale was: A — 1105 and up, B — 1038-1104, C — 972-1137, D — 905-971, and F — 904 and below. North Carolina's SAT average for public schools on this scale has rated a low C for several years, so including the SAT in our system marginally *improves* grades for the state as a whole and for most school districts. This variable makes up 10 percent of the final score.

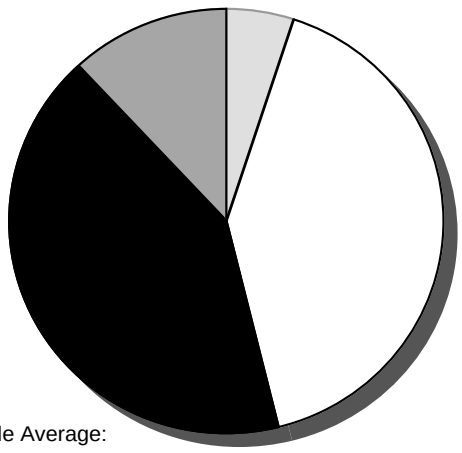
As the graph below shows, the *Grading Our Schools* system does not put North Carolina's public schools in a favorable light. Overall, the system gives state school districts a D+, and more than half of all districts receive a D or an F. Only six school systems in the state receive Bs, and none As.

We have added three new features to *Grading Our Schools 2000* that we think will provide more useful information to parents and taxpayers. First, in response to concerns about comparing the performance of district-run public schools with charter schools, we have included a "mock district" made up of the 20 schools in existence for at least three years — the minimum period many believe is necessary for meaningful evaluation. Unfortunately, the charter grades are based only on two variables; since few charters enroll high-school students, we do not have graduation rates and SAT information for the charter grouping.

Second, we have introduced a new ranking of all the school districts (including the charters) based on cost-effectiveness. District scores were divided by a five-year average of operating and capital spending per pupil in an attempt to determine how much each unit of educational output cost taxpayers. Although this formulation is a bit inelegant, we believe it to be illustrative of the fact that student achievement and the amount spent by schools do not rise in tandem. Some systems do well with little money, others do poorly with a lot of money. Student and family background characteristics, of course, do explain much of the variance among districts after adjusting for spending, but so do factors related to school personnel, curriculum, leadership, and priorities.

Finally, we have identified and ranked a subset of 21 school districts we call "Pacesetters" that both rate at least a 73.0 in our scoring system (a solid "C") and higher-than-average in measures of socioeconomic disadvantage. Pacesetting districts have one or both of the following characteristics: 1) a higher percentage of students eligible for free or reduced-price school lunch than the statewide average of 39.8 percent, 2) per-capita income in the surrounding community that is no more than 90 percent of the statewide average of $25,181.

Distribution of 1999-2000 District Grades



Statewide Average:

D+

98-99 Grades

"A" Average	0%
"B" Average	6.0%
"C" Average	35.9%
"D" Average	46.2%
"F" Average	12.0%

	No. of Districts
"A" Average	0
"B" Average	6
"C" Average	48
"D" Average	49
"F" Average	14

NOTE: The Locke Foundation assigned letter grades to districts based upon a weighted index including the district's overall ABC scale score and percentage at grade-level, its average SAT score, and its four-year graduation rate.

There is nothing sacrosanct about this grading system, of course. Indeed, due in part to comments and suggestions from others, we have somewhat altered the system over time, making sure to adjust grades from previous years to allow for apples-to-apples comparisons. Nor is it necessarily a system that we believe the state should adopt in its current form.

But it does reflect a useful compilation of existing outcome information for North Carolina school districts, while using letter grades to communicate the results more easily and effectively to average North Carolinians.

Cost-Effectiveness Rankings of N.C. School Districts*, 1999-2000

** Includes LEAs Since Merged and Treats 3-year Charters as a District*

School District	Cost Per Grade Point (% State Average)	RK	School District	Cost Per Grade Point (% State Average)	RK	School District	Cost Per Grade Point (% State Average)	RK
Cabarrus	73.00%	1	Yancey	93.82%	41	Hoke	109.63%	80
Watauga	80.60%	2	Duplin	94.10%	42	Alleghany	110.13%	81
McDowell	80.77%	3	Craven	94.12%	43	Montgomery	110.76%	82
Union	80.77%	4	Polk	94.50%	44	Robeson	111.59%	83
Davidson	81.34%	5	Newton-Conover	94.59%	45	Edenton/Chowan	112.11%	84
Stanly	82.88%	6	Sampson	95.04%	46	Beaufort	112.16%	85
Transylvania	83.34%	7	Granville	95.28%	47	Kannapolis City	112.54%	86
Burke	83.64%	8	Clay	95.41%	48	Carteret	112.70%	87
Henderson	85.28%	9	Rockingham	95.83%	49	Edgecombe	112.83%	88
Davie	85.56%	10	Nash-Rocky Mount	96.12%	50	Graham	112.98%	89
Alexander	85.77%	11	Rutherford	96.26%	51	Scotland	114.11%	90
Buncombe	86.11%	12	Harnett	96.29%	52	Martin	114.15%	91
Mooresville City	86.47%	13	Pender	96.29%	53	Bladen	114.39%	92
Person	86.94%	14	Lenoir	97.37%	54	Orange	115.26%	93
Catawba	87.19%	15	Wake	97.47%	55	Pamlico	115.89%	94
3-Year Charters	87.56%	16	Rowan-Salisbury	97.96%	56	Mecklenburg	117.06%	95
Cleveland	88.56%	17	Mount Airy City	98.15%	57	Lexington City	117.52%	96
Caldwell	89.64%	18	Richmond	98.39%	58	Anson	117.62%	97
Onslow	89.99%	19	Madison	98.95%	59	Currituck	118.36%	98
Alamance-Burlington	90.26%	20	Camden	99.04%	60	Greene	120.97%	99
Wayne	90.29%	21	Hickory City	99.57%	61	Durham	121.17%	100
Moore	90.31%	22	**State Average**	**100.00%**		Franklin	122.27%	101
Wilkes	90.64%	23	New Hanover	100.27%	62	Pasquotank	123.07%	102
Mitchell	91.15%	24	Lee	100.36%	63	Stokes	123.16%	103
Dare	91.38%	25	Clinton City	100.52%	64	Northampton	123.49%	104
Surry	91.59%	26	Wilson	100.77%	65	Vance	125.88%	105
Yadkin	91.98%	27	Roanoke Rapids City	101.79%	66	Perquimans	127.81%	106
Cumberland	92.05%	28	Guilford	102.66%	67	Gates	128.16%	107
Macon	92.05%	29	Avery	105.47%	68	Hertford	130.16%	108
Kings Mountain	92.33%	30	Whiteville City	106.03%	69	Thomasville City	131.50%	109
Johnston	92.47%	31	Brunswick	106.21%	70	Bertie	133.91%	110
Elkin City	92.55%	32	Cherokee	106.42%	71	Washington	134.42%	111
Jackson	92.72%	33	Columbus	106.67%	72	Asheville City	134.43%	112
Asheboro City	92.79%	34	Forsyth	106.92%	73	Jones	141.38%	113
Lincoln	93.05%	35	Caswell	107.04%	74	Halifax	142.27%	114
Randolph	93.51%	36	Chatham	107.54%	75	Warren	146.17%	115
Puitt	93.55%	37	Swain	107.55%	76	Tyrrell	154.71%	116
Haywood	93.74%	38	Ashe	108.47%	77	Weldon City	165.56%	117
Iredell-Statesville	93.77%	39	Shelby City	109.00%	78	Hyde	206.94%	118
Gaston	93.79%	40	Chapel Hill-Carrboro	109.30%	79			

North Carolina Pacesetter* School Districts, 1999-2000

** Received a C or Better on Final Grade With Relatively Disadvantaged Student Population*

School District	Percentage at Grade Level	Higher % Needy Than NC Avg.	County Income <90% of NC	School District	Percentage at Grade Level	Higher % Needy Than NC Avg.	County Income <90% of NC
Alleghany	75.0	x		Jackson	75.4		x
Ashe	73.1	x	x	Macon	74.2	x	x
Avery	76.6	x	x	McDowell	73.5		x
Burke	73.6		x	Mitchell	73.1	x	x
Camden	76.5		x	Mt. Airy City	78.6		x
Cherokee	79.9	x	x	New Hanover	73.9	x	
Clay	84.3	x	x	Stanly	75.0	x	x
Currituck	74.3		x	Surry	73.8		x
Elkin City	83.7		x	Watauga	82.0		x
Graham	73.8	x	x	Yancey	78.7		x
Mooresville City	75.3	x					

2000 Grading Our Schools — Scores and Letter Grades (Final)

School District	ABC-Percent at Grade Level		ABC-Avg Scale Score (4th, 8th)		4-Year Grad. Rate		Avg. SAT		Final 2000		Final 1999	
Alamance	68.9	D+	160.0	C-	61.4	D+	967	D+	69.0	D+	67.9	D+
Alexander	72.7	C-	159.7	D+	64.0	C-	932	D	70.9	C-	70.7	C-
Alleghany	73.3	C	162.3	C+	71.3	C+	960	D+	75.0	C	72.5	C-
Anson	58.4	F	156.1	F	61.5	D+	887	F	60.0	D-	58.0	F
Ashe	76.3	C	161.8	C	55.2	D-	996	C	73.1	C	73.4	C
Avery	78.9	C+	162.8	B-	61.4	D+	1007	C	76.6	C	75.5	C
Beaufort	68.5	D+	159.3	D+	48.0	F	961	D+	65.3	D	66.4	D
Bertie	50.9	F	155.3	F	52.3	F	810	F	52.5	F	51.9	F
Bladen	60.1	D-	156.8	F	61.0	D+	874	F	61.0	D-	59.3	F
Brunswick	71.6	C-	160.7	C-	56.2	D-	965	D+	69.8	D+	68.7	D+
Buncombe	79.0	C+	163.1	B-	64.6	C-	1059	B	78.4	C+	78.2	C+
Asheville	68.7	D+	162.6	C-	49.1	F	1038	C+	67.3	D+	67.7	D+
Burke	79.1	C+	159.0	C	53.3	F	983	C-	73.6	C	72.3	C-
Cabarrus	78.8	C+	160.5	C+	66.6	C	1013	C	77.7	C+	77.7	C+
Kannapolis	68.1	D+	161.2	D+	50.0	F	910	D-	64.6	D	66.0	D
Caldwell	72.8	C-	161.7	C-	56.0	D-	1001	C	70.7	C-	69.4	D+
Camden	75.7	C	157.0	C	75.4	B	977	C-	76.5	C	67.5	D+
Carteret	75.0	C	161.4	C	63.5	C-	994	C	74.2	C	73.6	C
Caswell	62.6	D-	159.9	D-	49.2	F	868	F	63.5	D	60.0	D-
Catawba	74.4	C	161.8	C	66.1	C	1010	C	74.5	C	73.7	C
Hickory	70.2	C-	159.9	D+	51.1	F	1058	B-	68.6	D+	68.4	D+
Newton-Con	75.8	C	162.6	C	87.9	A+	1036	C+	80.7	B-	69.0	D+
Chatham	71.1	C-	159.9	C-	54.4	D-	983	C-	68.9	D+	68.5	D+
Cherokee	82.3	B-	162.6	C+	68.4	C	1016	C	79.9	C+	80.1	B-
Chowan	64.9	D	158.1	D	64.5	C-	971	D+	66.5	D	63.9	D
Clay	83.1	B	164.6	B	79.2	B+	1032	C+	84.3	B	80.1	B-
Cleveland	71.7	C-	160.2	C-	57.8	D	955	D+	69.6	D+	67.2	D+
Kings Mountain	74.8	C	161.6	C	54.2	D-	929	D	71.0	C-	70.5	C-
Shelby	69.5	D+	159.1	D+	60.6	D+	1007	C	69.3	D+	66.7	D
Columbus	64.0	D	157.3	D-	50.0	F	872	F	60.8	D-	61.7	D-
Whiteville	66.9	D	158.4	D	57.4	D	894	F	65.0	D	69.8	D+
Craven	72.2	C-	160.7	C	56.2	D-	971	D+	70.2	C-	70.0	C-
Cumberland	67.2	D+	158.8	D	63.5	C-	960	D+	67.8	D+	68.7	D+
Currituck	78.3	C+	162.6	C+	55.4	D-	967	D+	74.3	C	70.4	C-
Dare	76.7	C	162.1	C+	66.1	C	994	C	76.0	C	80.5	B-
Davidson	73.5	C	161.4	C	64.2	C-	978	C-	73.2	C	73.3	C
Lexington	61.5	D-	157.5	D-	55.2	D-	956	D+	62.1	D-	62.1	D-
Thomasville	59.0	F	156.3	F	48.7	F	870	F	57.3	F	57.7	F
Davie	76.7	C	162.3	C+	68.3	C	1002	C	76.7	C	75.8	C
Duplin	68.7	D+	160.3	C-	56.0	D-	878	F	66.7	D	66.6	D
Durham	64.8	D	158.2	D	48.7	F	994	C	63.4	D	62.5	D-
Edgecombe	59.4	F	155.9	F	52.2	F	902	F	58.5	F	60.5	D-
Forsyth	69.8	D+	159.9	C-	58.8	D	1003	C	69.5	D+	70.5	C-
Franklin	64.2	D	159.0	D+	54.4	D-	960	D+	64.4	D	64.0	D
Gaston	71.7	C-	159.4	D+	58.8	D	949	D	69.3	D+	68.9	D+
Gates	70.7	C-	160.5	C-	52.7	F	902	F	67.5	D+	64.4	D
Graham	77.4	C+	161.5	C	58.0	D	980	C-	73.8	C	73.8	C
Granville	71.6	C-	158.8	D	49.5	F	971	D+	67.0	D+	65.3	D
Greene	62.9	D-	156.8	F	54.6	D-	914	D-	61.6	D-	62.0	D-
Guilford	70.4	C-	160.0	C-	59.2	D	999	C	69.9	D+	69.1	D+
Halifax	53.0	F	156.7	F	49.4	F	760	F	53.0	F	52.2	F
Roanoke Rapids	71.3	C-	160.4	C-	71.4	C+	980	C-	73.0	C	72.7	C-
Weldon	52.3	F	155.0	F	53.9	F	724	F	52.0	F	45.2	F
Harnett	70.0	C-	159.5	D+	57.2	D	960	D+	68.3	D+	68.3	D+
Haywood	78.1	C+	162.6	C+	68.2	C	1009	C	77.6	C+	76.4	C
Henderson	78.1	C+	162.8	B-	62.2	D+	1038	C+	76.9	C	76.4	C
Hertford	48.2	F	155.2	F	56.0	D-	770	F	51.3	F	49.0	F
Hoke	59.3	F	156.3	F	42.7	F	854	F	55.9	F	56.1	F
Hyde	60.2	D-	157.3	D-	70.3	C+	911	D-	64.0	D	62.8	D-

NOTE: ABC and SAT scores from 1999-00, graduation rate from 1998-99; see page 21 for details on scoring system used.

School District	ABC-Percent at Grade Level		ABC-Avg Scale Score (4th, 8th)		4-Year Grad. Rate		Avg. SAT		Final 2000		Final 1999	
Iredell	72.3	C-	160.3	C-	55.8	D-	995	C	70.3	C-	69.4	D+
Mooresville	74.8	C	161.7	C	64.8	C-	1054	B-	75.3	C	73.2	C
Jackson	77.6	C+	161.9	C	62.5	D+	995	C	75.4	C	75.5	C
Johnston	77.6	C+	161.9	C+	61.2	D+	970	D+	74.8	C	74.3	C
Jones	62.6	D-	158.3	D	56.0	D-	834	F	61.6	D-	62.8	D-
Lee	71.2	C-	160.3	C-	57.0	D	963	D+	69.4	D+	68.7	D+
Lenoir	71.8	C-	160.7	C-	40.1	F	950	D	66.4	D	65.6	D
Lincoln	69.3	D+	159.4	D+	58.7	D	941	D	67.9	D+	66.7	D
Macon	76.5	C	162.6	C+	57.3	D	997	C	74.2	C	75.1	C
Madison	74.2	C	161.3	C	58.4	D	964	D+	71.9	C-	74.7	C
Martin	59.9	F	157.6	D-	57.0	D	882	F	60.7	D-	59.5	F
McDowell	72.5	C-	161.4	C	66.1	C	1002	C	73.5	C	74.1	C
Mecklenburg	66.7	D	159.3	D+	65.2	C-	989	C-	68.7	D+	67.5	D+
Mitchell	72.7	C-	160.9	C	64.2	C-	1017	C	73.1	C	69.4	D+
Montgomery	59.2	F	157.1	D-	54.1	D-	931	D	60.1	D-	61.8	D-
Moore	73.3	C	161.4	C	65.1	C-	990	C-	73.5	C	71.3	C-
Nash	68.7	D+	160.0	C-	69.7	C+	957	D+	70.7	C-	69.3	D+
New Hanover	74.6	C	161.4	C	62.8	D+	1007	C	73.9	C	74.7	C
Northampton	59.3	F	156.8	F	50.8	F	798	F	57.3	F	58.3	F
Onslow	73.7	C	161.1	C	56.6	D-	975	C-	71.3	C-	70.6	C-
Orange	74.9	C	160.8	C	55.8	D-	994	C	71.9	C-	71.5	C-
Chapel Hill	87.2	B+	166.9	A	68.9	C	1175	A+	87.9	B+	85.4	B
Pamlico	72.1	C-	161.8	C	62.5	D+	981	C-	72.4	C-	74.0	C
Pasquotank	62.1	D-	158.0	D	46.0	F	893	F	59.8	F	60.4	D-
Pender	75.0	C	161.5	C	57.6	D	936	D	71.8	C-	71.8	C-
Perquimans	70.9	C-	159.1	D+	55.5	D-	903	F	67.2	D+	64.7	D
Person	72.1	C-	160.6	C-	60.3	D+	941	D	70.5	C-	67.7	D+
Pitt	69.5	D+	159.5	D+	52.8	F	1002	C-	67.7	D+	65.7	D
Polk	77.3	C+	163.3	B-	70.6	C+	973	c-	77.7	C+	75.9	C
Randolph	65.6	D	160.5	C-	56.5	D-	979	C	66.8	D	68.5	D+
Asheboro	70.4	C-	160.6	C-	61.4	D+	1017	F	71.0	C-	68.8	D+
Richmond	65.1	D	158.8	D	63.0	C-	891	F	65.6	D	65.7	D
Robeson	54.5	F	156.9	F	42.6	F	858	F	53.9	F	54.2	F
Rockingham	70.5	C-	159.7	D+	56.1	D-	966	D+	68.5	D+	66.5	D
Rowan	69.6	D+	159.8	D+	54.1	D-	986	C-	68.0	D+	68.2	D+
Rutherford	71.9	C-	160.2	C-	54.0	D-	948	D	68.8	D+	67.6	D+
Sampson	69.9	D+	158.6	D	61.4	D+	872	F	67.2	D+	66.8	D
Clinton	70.3	C-	161.1	C	62.3	D+	895	F	69.6	D+	68.0	D+
Scotland	68.2	D+	159.0	D	48.1	F	908	D-	64.2	D	64.9	D
Stanly	76.4	C	160.8	C	69.8	C+	947	D	75.0	C	73.4	C
Stokes	52.0	F	159.5	D+	59.4	D	956	D+	59.7	F	69.1	D+
Surry	76.6	C	161.9	C	58.9	D	978	C-	73.8	C	72.8	C-
Elkin	82.4	B-	163.4	B-	83.0	A-	1007	C	83.7	B	80.7	B-
Mount Airy	80.1	B-	163.4	B-	64.2	C-	1031	C+	78.6	C+	74.4	C
Swain	73.5	C	161.4	C	57.7	D	987	C-	71.9	C-	75.6	C
Transylvania	84.0	B	165.3	B+	73.7	B-	1004	C	83.6	B	83.3	B
Tyrrell	56.8	F	159.1	D+	76.7	B	910	D-	64.9	D	63.8	D
Union	74.5	C	161.8	C	65.1	C-	991	C-	74.3	C	73.5	C
Vance	58.1	F	156.4	F	40.4	F	858	F	54.9	F	53.8	F
Wake	79.3	C+	163.1	B-	68.5	C	1061	B	79.5	C+	79.3	C+
Warren	52.7	F	156.0	F	38.8	F	886	F	52.0	F	55.5	F
Washington	48.3	F	155.8	F	66.7	C	836	F	55.1	F	54.2	F
Watauga	83.9	B	165.0	B+	64.4	C-	1054	B-	82.0	B-	80.3	B-
Wayne	67.9	D+	159.7	D+	63.2	C-	933	D	68.3	D+	69.5	D+
Wilkes	74.1	C	161.6	C	58.4	D	991	C-	72.4	C-	71.5	C-
Wilson	70.5	C-	160.2	C-	51.1	F	943	D	67.4	D+	67.3	D+
Yadkin	69.1	D+	160.9	C	63.7	C-	936	D	69.8	D+	70.1	C-
Yancey	80.6	B-	163.2	B-	64.4	C-	1026	C+	78.7	C+	75.9	C
3 Yr. Charters	66.6	D	159.6	D+	*		*		67.2	D+	*	*
State Average	69.8	D+	160.3	C-	59.2	D	990	C-	69.6	D+	69.3	D+

NOTE: ABC and SAT scores from 1999-00, graduation rate from 1998-99; see page 21 for details on scoring system used.

School Choice in North Carolina

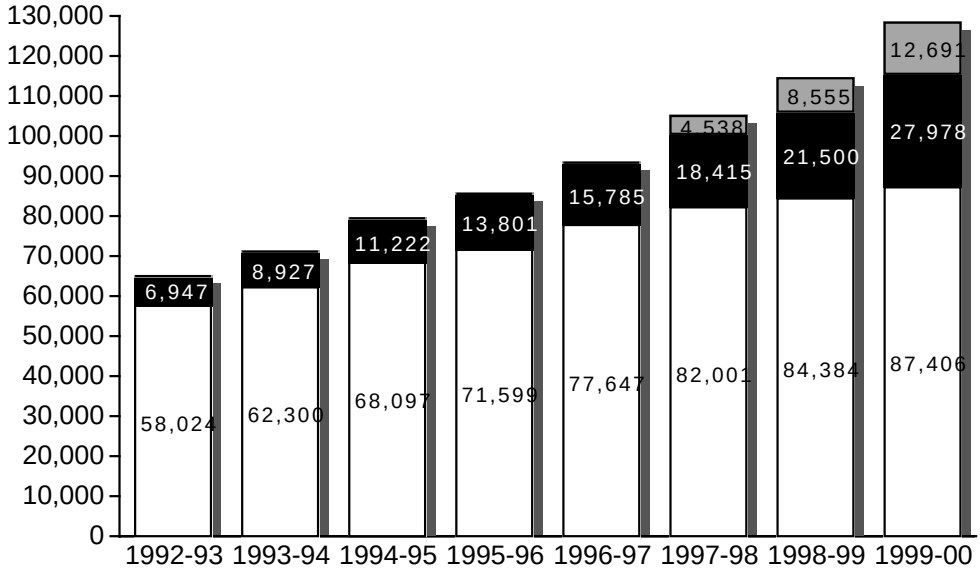
Meteoric Rise in Enrollment Coincides with Promising Data on Outcomes

It is likely that, were there a dramatic change in public policy in North Carolina tomorrow that provided significant assistance to families who chose to send their children to private schools, the public schools would continue to dominate elementary and secondary education. Many generations of North Carolinians, lacking the financial means to exercise choice by paying private-school tuition or moving to neighborhoods where the assigned public school is of a high quality, have little experience with the idea of choosing the school their children will attend. Many parents, rightly or wrongly, are satisfied with the public schools their children attend, and are not interested in private, parochial, charter, or home schooling options.

Nor is the advocacy of expanded choice for parents inconsistent with strong support for the state's traditional role in public education. Just as public universities in North Carolina coexist and compete with private institutions of higher education, and public hospitals with for-profit and non-profit ones, so could public schools coexist and compete with an expanded private marketplace for elementary and secondary education in which at least some families are afforded state-funded scholarships or tax deductions. Indeed, there is no rational distinction between the current practice of allowing families, particularly those at the lower end of the income scale, to spend their Pell grants, Smart Start subsidies, food stamps, or Medicaid funds at private institutions (including religious ones) and the use of scholarships or tax deductions to help cover the cost of private schools.

The movement towards school choice in North Carolina has been one of the most fascinating trends in education. The state's largest urban areas have long featured some schools of choice, including both private schools and public "magnet" schools to promote voluntary racial desegregation. More recently, public school districts have experimented with broader choice among public schools, such as Cumberland's open enrollment policy.

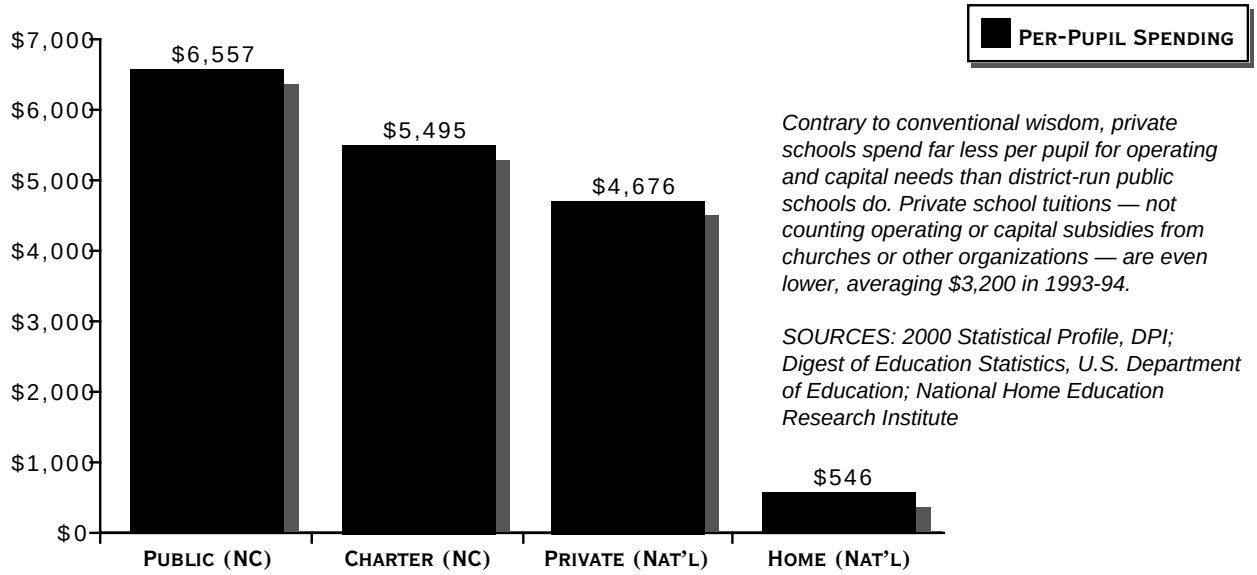
STATE ENROLLMENT TREND IN INDEPENDENT SCHOOLS OF CHOICE



The number of North Carolina children enrolled in private, charter, and home schools reached 128,075 in 1999-2000, up 97 percent from 64,971 seven years earlier.

SOURCES: N.C. Office of Non-Public Instruction and Office of Charter Schools.

Comparing District-Run and Independent School Costs, 1998-99



Contrary to conventional wisdom, private schools spend far less per pupil for operating and capital needs than district-run public schools do. Private school tuitions — not counting operating or capital subsidies from churches or other organizations — are even lower, averaging $3,200 in 1993-94.

SOURCES: 2000 Statistical Profile, DPI; Digest of Education Statistics, U.S. Department of Education; National Home Education Research Institute

The growth of schools of choice independent from district control is the latest trend to watch. Just since 1993, the number of students in North Carolina private, charter, or home schools has roughly doubled, while pilot school choice programs for poor children have been set up in each of the state's major cities.

The birth of the state's charter school movement has received the most attention, probably because of the fact that public funds are involved and state leaders otherwise suspicious of school choice programs have embraced charters as a palatable alternative. This fall, 95 charter schools are operating in North Carolina, enrolling students in every grade and affecting almost every part of the state.[92]

The state's charter school law, passed in 1996, allows parents, teachers and community leaders to start their own public schools without bureaucratic micromanagement or burdensome regulations. Charter schools have unique missions and instructional alternatives to traditional public schools. If parents who freely choose the school are unhappy with its performance, they can remove their children and per-pupil dollars from the school. This accountability forces the school to treat parents as customers and provide results for children — or the school will go out of business.

Charter schools are a prime example of how public education can be delivered differently. Rather than protected agencies run by the government, public schools should be any schools that are open to the public, paid for by the public and accountable to the public. Charter schools provide money directly to the school, so more money can go into the classroom rather than to administration and support services. This model of individual school governance, direct school funding and parental choice may well be the wave of the future for all public education.

How are North Carolina's charter schools doing? It depends on whom you ask. Because a quarter of the low-performing schools in this year's ABCs program were charters, some critics pounced, arguing that the idea had failed. But a more thoughtful analysis of the results leads to a radically different conclusion. Charter schools in operation for at least three years — and thus given the time to build or acquire permanent buildings, hire staff, and implement their educational missions — posted EOG results in 1999-2000 that were only slightly lower than public schools as a whole, despite the fact that they spent 84 percent of what district-run schools spent and

frequently enrolled higher percentages of disadvantaged students. These are promising early signs of success, not failure. Even if charter schools on average never exceeded public schools in performance, they might at least serve as examples of how to spend taxpayer dollars more efficiently in public education.

Focusing attention on well-established charters is neither a way to make excuses for failing schools nor an unprecedented idea. Because of the complexities of start-up, which have been confirmed in every national study, the N.C. Department of Public Instruction itself wisely remarked in a study last year that it will take three-to-five years to truly determine the performance of most charter schools. This is especially true in test scores. Research provides clear evidence that large-scale transfers of students to new schools frequently result in a sizable one-year drop in test scores.[93] Many charters even in their second year are still properly considered "start-ups."

That having been said, the state should exercise great caution in awarding charters to prospective operators, checking carefully to see if they have sufficient financial and community support and a coherent education mission (though it may be very different from state orthodoxy). Furthermore, unreasonable and repeated violations of rules regarding financial and academic management should imperil a school's charter renewal. Perhaps most importantly, charters will live or die based on how well they serve their customers. Failing schools likely won't need the state to intervene, because parents will leave — and take their money with them. The fact that a school can lose customers, revenues, and ultimately fail is a refreshing element of the charter school approach.

Competition works. A study in established charter states shows that as charter school enrollment increases and deprives districts of greater amounts of funds upon which they had come to depend, districts begin to make more significant changes to and increase the pace of change — usually attributing it directly to competition from charters.[94] DPI acknowledges this study, saying it "found that true substantive change in school programs was directly related to the amount of financial impact the charter school had on the school system involved. Milder financial impacts resulted only in cosmetic changes or better 'advertising' for the public schools." Around the nation, another year of experience shows the competitive impact of charter schools only begins to have real effect when they are allowed to grow big enough to take large numbers of students away from school districts.[95]

Private School Choice in North Carolina

Except for a few disabled children who receive public subsidies to attend specialized private schools, students in North Carolina who enroll in private or home schools receive no assistance from taxpayers. The controversial idea of providing scholarships, tax credits, tax deductions, or other help to these families doesn't really require a great leap of faith. As previously mentioned, families can already use taxpayer funds to help defray the cost of a church-run day care center or a divinity degree at a private college or seminary. These programs properly view the choice of provider to be up to the parents, not the government, and restrictions on their use contrary to the recipients' rights and interests.

Many of the arguments traditionally trotted out against private school choice are red herrings, to put it charitably. Contrary to popular belief, most private schools cost far less to operate than the average public school does. In 1998-99, total per-pupil spending in North Carolina public schools averaged $6,557 — $5,899 in operating cost and $658 in capital cost (based on a five-year average). By comparison, charter schools in the state spent an average of $5,495 (largely because they don't receive capital funds).[96] Although no state-specific data exist on private school costs, national statistics show that private elementary and secondary schools spent an average of $4,676 per student in 1998-99. Tuitions were even lower — $3,200 in the most recent national survey — because the vast majority of private schools receive some aid from churches or philanthropists.[97]

The misconception arises because critics mistake the prep schools with which they are most familiar — such as Charlotte Country Day — for the average private school. In reality, prep schools account for about 15 percent of private school enrollment. In North Carolina, 70 percent of private school students attend religious institutions, where tuitions are in the $2,600 to $3,600 range rather than the $7,300 to $10,000 range among prep schools.[98]

Many other theoretical arguments against the idea can now be evaluated "on the ground" in privately funded school choice programs now underway in Charlotte, Raleigh, Greensboro, Winston-Salem, and Durham. The Children's Scholarship Fund-Charlotte, a project of the Locke Foundation, provides scholarships worth up to 75 percent of the cost of private schools to nearly 600 poor children in Mecklenburg County. In the other cities, the Carolina Educational Opportunity Fund — affiliated with the N.C. Education Reform Foundation — offers scholarship assistance to another 100 students.[99] After one years, both programs are finding high rates of parental satisfaction, a thriving and diverse market of participating private and religious schools, and as discussed later, large test score gains for the CSF students compared with their peers in the Charlotte-Mecklenburg Schools.

This is not the forum for an extended argument in favor of expanding school choice to include private schools. In brief, previous Locke Foundation and Smart Schools Alliance publications have recommended that state scholarships for use at private schools be offered to one or both of the following groups of North Carolina children: 1) students with family incomes at or below the poverty line, and 2) students in poor performing public schools. We do not advocate "voucher" programs to pay the cost of prep schools for wealthy families. Among other concerns, we share the fear of many in the private-school sector that if government subsidies played a large role in funding private schools, costly and damaging government regulations would follow.

For non-poor families who currently choose private or home schooling for their children, and those in the public schools who might be interested in the idea, we recommend a system of tax deductions and educational savings accounts to reduce or eliminate the taxes that families pay on their educational investments. Just as investments in financial capital, such as IRA deposits, should be tax-deductible in order to avoid the double-taxation of savings, so should family investments in the "human capital" of their children be deductible, since they yield future taxable income when the children enter the working world. Even a modest deduction of up to $3,000 per child would save families hundreds of dollars in state taxes and reduce the bias against private human capital formation that currently restricts parental choice and competition.[100]

The Real Cost of School Choice Programs

A carefully designed school choice program at the state level would cost taxpayers relatlively little. Means-testing the scholarships would reduce the number of eligible recipients. Furthermore, a targeted choice program in which significant numbers of students exit public schools in favor of private schools offers the prospect of financial savings to taxpayers. For example, say the state offers scholarships to low-income students averaging $3,500, enough to pay the tuition at most private schools. Recipients exiting the system would cost the state $3,500 each, but they had, on average, cost $6,557 — about $4,087 in state operating costs, $446 in federal dollars, $1,367 in local dollars, and $658 for capital — as public school students.[101]

Naturally, the math isn't quite that simple. An average cost of $6,557 for public school students means that some actual require higher expenditures and others a lower amount. For example, students with severe physical or emotional disabilities often cost far more per student — $8,000, $10,000, or more. With a fixed-dollar scholarship, these students are unlikely to transfer. Also, if only one or two students left a particular public school classroom for a private school, the need for teachers or instructional space would not be significantly alleviated.

Still, these are reasons for caution in estimating savings, not for failing to do so. We ran a projection to see what the fiscal impact of a variety of scholarship and tax deduction plans would be using 1998-99 financial and enrollment data for public and private schools in North Carolina. Using extremely conservative assumptions, we found that the net cost to taxpayers would range from $23 million to $79 million, depending on the option chosen, while possibly increasing private school enrollment by as much as 62 percent (see table on the next page). In the next section, we will summarize recent research findings that suggest that such a school choice program would have a dramatic impact on test scores, particularly for disadvantaged, and significantly shrink the performance gap between white and black students.

SCHOOL CHOICE OPTIONS IN NORTH CAROLINA — COSTS AND SAVINGS

Options	Assumptions	Impact
1. Offer $3,500 State Scholarships to Poorest 5% of North Carolina Children	Total School-Age Population in NC (1999)	1,334,804
	5% Of Students Eligible	66,740
	Maximum Cost to State	$233,590,700
	State savings if 90% were previously enrolled in public schools costing one-half of state & local average cost per pupil	$122,775,272
	Net Cost to State	$110,815,428
	Net Savings to Local Governments	$41,085,267
2. Offer $3,500 State Scholarships to Poorest One-Half of Students in Schools With Fewer Than Half at Grade Level	Total Enrollment in the 102 Schools With Fewer Than Half At Grade Level on EOG	52,612
	Cost if Two-Thirds of Eligible Students Chose Private Schools	$61,687,570
	State savings if recipients previously cost half of state & local average cost per pupil	$36,025,541
	Net Cost to State	$25,662,029
	Net Savings to Local Governments	$12,055,514
3. Offer $3,500 State Scholarships to Poorest One-Half of Students in 25 Lowest-Performing School Districts	Total Enrollment in 25 Districts with Lowest % at Grade Level (1999)	148,650
	Cost if Two-Thirds of Eligible Students Chose Private Schools	$174,292,125
	State savings if recipients previously cost half of state & local average cost per pupil	$101,786,601
	Net Cost to State	$72,505,524
	Net Savings to Local Governments	$34,061,661
4. Make First $3,500 of Private, Home School Expenses Deductible on State Taxes	Private, Home School Enrollment (1999)	105,884
	Cost if All Currently Enrolled Took Deduction and Enrollment Increased 5%	$27,238,659
	State savings if the new enrollees previously cost half the per-pupil cost	$10,821,345
	Net Cost to State	$16,417,314
	Net Savings to Local Governments	$7,242,466

NOTES: 1) annual average cost of private education is estimated by U.S. Department of Education at less than $3,200 — $2,138 for elementary and $4,578 for secondary; 2) estimates of public school savings are conservative. In 1998-99, North Carolina spent an average of $6,557 per student in public schools — $4,087 by the state, $1,367 by localities, $446 by the federal government, and $658 in capital costs.

SOURCES: N.C. Department of Public Instruction, Financial and Enrollment Data for 1997-98 school year; Office of State Planning, School-Aged Population in 1999; N.C. Office of Non-Public Instruction, 1999 Private and Home School Enrollment; U.S. Department of Education, *Digest of Education Statistics*, Private School Tuitions (table 62).

New Studies on Improving Outcomes

Next Round on Reform in North Carolina Should Focus on Productivity

The state and North Carolina's counties have made consistent efforts to raise education spending dramatically in the last two decades. Just since 1989, public school spending in North Carolina, adjusted for inflation and student enrollment, has increased by more than a one-quarter.[102] Public schools are by far the largest item in the state budget, accounting for more than 35 percent of all state spending.[103] Combined state, local and federal spending in 1998-99 was more than $8.4 billion dollars, including operating and capital costs, and the average per-pupil expenditure was $6,557.[104] State government provides more than two-thirds of all school funds, a considerably higher percentage than most states, and this year completed funding for the Excellent Schools Act, a four-year, $1 billion plan to raise teacher salaries.

During the 1990s, there have been tremendous increases in special funds for supplementing low-wealth districts and small districts, pushing per-pupil spending in many of the state's smaller, poorer districts considerably higher than in urban districts such as Charlotte-Mecklenburg, Guilford and Wake. For example, the Weldon City School district in northeastern North Carolina's Halifax County spends $7,851 per pupil for operations — fourth highest in the state and about $1,400 higher than Mecklenburg did. The top-spending district is Hyde County, with more than $10,000 per pupil. For those who believe spending is related to performance, both Weldon and Hyde score among the lowest school districts in the state on EOG, EOC, SAT, and other tests.[105]

The top 10 districts by per pupil spending in North Carolina averaged about $7,638 per student and averaged 67 percent at grade level on state tests. The bottom 10 districts spent an average of $5,308 per student — about 31 percent less — but outperformed the top 10 spenders on state tests with an average of 72 percent.[106]

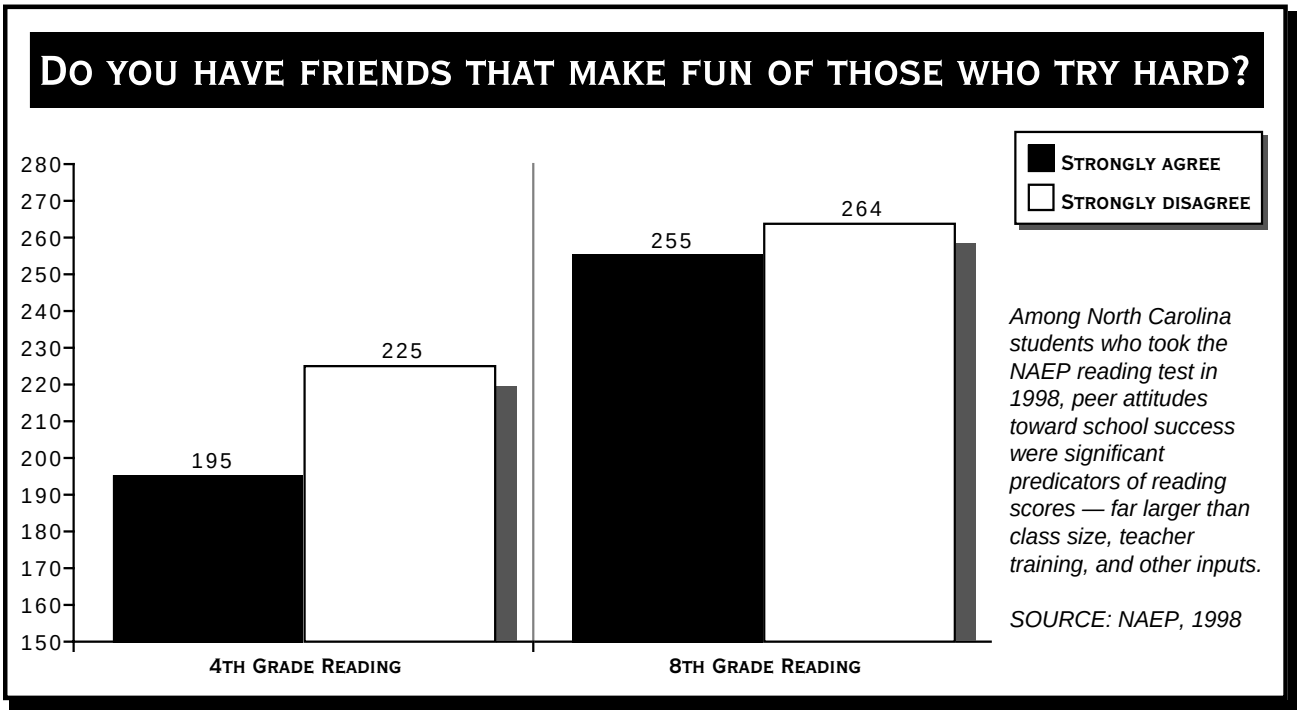
A great deal of research shows that most popular education inputs such as spending and class size do not affect achievement. A 1998 statistical analysis by Michael Lowrey of the John Locke Foundation measured most essential elements, including socioeconomic and educational indicators, to determine the impact of spending. It showed with a high degree of confidence that school district spending in North Carolina has no correlation to performance.[107] In 1997, Dr. Michael Walden, an N.C. State economics professor, analyzed 17 different measures of student performance by district, finding that socioeconomic characteristics are much more important than school inputs in determining student performance in North Carolina.[108]

Recent national research regarding North Carolina reveals similar results. A 1998 analysis of North Carolina NAEP test results by David Grissmer of the Rand Corporation, which as previously mentioned found the state had made academic gains between 1990 and 1996, found that "real per pupil spending, teacher/pupil ratios (closely associated with class size), teachers with advanced degrees and experience levels of teachers" had no impact on performance.[109]

Lessons from North Carolina's NAEP Results

One element of the NAEP reading and math testing program that does not get as much attention as it deserves is a series of surveys of students, teachers, and administrators in each participating state. NAEP correlates the results of these surveys with test scores, looking for connections between inputs and outputs in public education.

An analysis of North Carolina surveys from the 1998 reading tests and 1996 math tests shows that many costly reforms proposed or enacted in our state in recent years are unlikely to produce significant gains in student achievement.[110] For example, the Excellent Schools Act, passed in 1997, increased spending on professional



development and training programs for teachers, financed expansions of computer and technology use, and gave large increases in salary for teachers receiving masters' degrees or national certification. But according to North Carolina's NAEP results, there is absolutely no substantial increase in the scores of students who learn from teachers with masters' degrees, in classrooms with computers, or in relatively smaller class sizes. In fact, 8th-grade science students in North Carolina in classes with more than 30 students scored significantly higher than students in smaller classes.

Trendy education reforms didn't make the grade, either. Teachers trained in "outcome-based education" or "cultural sensitivity" did not have a positive impact on test scores. Moreover, extensive use of "portfolios" in place of traditional, test-based assessments made no contribution to student improvement. In fact, portfolios used in 4th-grade classes resulted in a significant decline in test performance. Other reforms were successful only with 8th graders. Assigning students to classes according to ability, for example, was beneficial to 8th-graders but had no impact on 4th-grade scores. Similarly, misbehavior problems within schools seemed to lower scores in the 8th grade but not the 4th.

In July 2000, Grissmer and his colleagues at RAND issued a new report examining state-level NAEP results from 1990 to 1996. While they did not conclude that there was no connection between per-pupil spending and scores — a finding discussed below — they did, once again, find that raising teacher pay and paying bonuses to encourage teachers to get master's degrees did not result in higher student achievement.[111] Unfortunately, this means that much of North Carolina's recent, costly investment in school reform efforts is unlikely to pay off.

Mining the NAEP Data for Solutions

So what does make a difference? In North Carolina's NAEP data, student attitudes and friendships were the largest contributors. The NAEP surveys found a strong negative correlation between test scores and students who had friends who "make fun of those who try hard" (see below) — underlining the critical importance of setting high expectations and stressing the value of education, particularly among minority students. Similarly, students who had friends who would help them with schoolwork scored significantly higher than did other

students. Positive student attitudes, as reflected in both teacher and administrator survey results, were also strongly predictive of high achievement. Parental involvement was also critical, as were some factors under the control of parents such as television viewing and completion of homework.

In their latest NAEP study, Grissmer and his RAND colleagues do conclude that some public policy interventions can have an impact on test scores. Because the researchers are not conservatives or critics of public education, and have in fact constructed a model that likely overstates the effectiveness of state reforms,[112] their conclusions deserve particular emphasis. For example, their latest study found that increasing per-pupil spending can have a statistically significant impact on average test scores. Unfortunately, the effect is very small. We estimated, based on the Rand findings, that a 33 percent increase in public school spending in North Carolina would result in only 2 percentile-point gain in test scores but would cost a staggering $2 billion (see table below).

Increasing average spending is, naturally, a crude approach. A more targeted one would be either to dramatically increase teacher pay, reduce class sizes or pupil-teacher ratios, or expand public preschool programs— all considered legislative priorities by state and national lobbies for public education. As previously discussed, raising teacher pay without a realistic means of rewarding good performance is a recipe for failure. A 25 percent raise would, in 1998-99 dollars, cost $873 million but yield no test score gains according to the RAND research.

Class size is a more complex subject. Across the country, educators and politicians have advocated hiring additional teachers and building new schools in order to reduce the number of students in each class. The theory is that teachers can give more individual attention to struggling students in smaller settings, resulting in higher achievement. The achievement gains have to be significant, however, in order to keep smaller classes from

SCHOOL REFORM IN NORTH CAROLINA — OPTIONS FOR IMPROVING SCORES

School Reform	Est. Annual Cost	Gain (Standard Dev.)	Gain (Percentile Points)
1. Raise average pay by 25% to attract, retain good teachers	$872,770,315	0	0
2. Use 15% bonuses to increase master's degree teachers 33%	$53,444,284	0	0
3. Triple child participation in public preschool programs	$105,599,900	0.011	Less than 1 point
4. Reduce pupil-teacher ratio by 20% across the board	$1,034,761,589	0.047	1 point
5. Increase average public school per-pupil spending by 25%	$2,016,161,113	0.080	2 points
6. Reduce K-3 average class size to 15, as in Tennessee	$486,931,878	0.074	2 points
7. Provide $3,500 scholarships to poorest 30% of N.C. students	$188,952,064	0.075	2 points

NOTES: 1) annual cost for school reforms includes projected impact on operational and capital spending. Estimate for scholarships assumes 90% of poor students receiving scholarships were previously enrolled in public schools costing half the average PPE. 2) Gains were projected after four years of implementation and reflect a statewide weighted average of participating and nonparticipating students in each reform.

SOURCES: N.C. Department of Public Instruction, Financial and Enrollment Data for 1997-98 school year; Manhattan Institute study of CSF-Charlotte, August 2000; Rand Corporation study of NAEP Results for 1990-96, July 2000; University of Rochester study of Tennessee class size reduction, Feb. 1998.

reducing the productivity of education. While the findings of non-experimental studies, relying on statistics assessments of state data, have been mixed, most advocates of class size reduction point to Tennessee's well-publicized Project STAR for evidence of the value of smaller classes.

The debate about methodology and data interpretation in the Tennessee experiment is too complex to be presented here. For our purposes, the key issue is how large the reductions have to be for test score gains to appear, and in what grades the reduction seems to make a difference. Some researchers, including Grissmer and his Rand colleagues, interpret the STAR experiment to prove that there are significant gains from class size reductions in grades K-4.[113]

But Eric Hanushek, a professor of political economy at the University of Rochester and a former deputy director of the Congressional Budget Office, pointed out in an analysis of the project that the outcome gains appear after kindergarten and are simply maintained in subsequent years. "If smaller classes were valuable in each grade," he wrote, "the achievement gap would widen. It does not. In fact, the gap remains essentially unchanged through the sixth grade, even though the experimental students from the small classes return to larger classes for the 4th through 6th grades. The inescapable conclusion is that the smaller classes at best matter in kindergarten."[114]

To reduce class sizes in North Carolina in grades K-3 to the levels achieved in Tennessee's Project STAR would cost an estimated $490 million annually for operations and capital and yield, at best, a 2 percentile-point gain in statewide scores after four years. If Hanushek is right, however, results almost as large might be achievable at far less cost (about $128 million a year). Another approach is to emulate the class size effects in critical subjects. The most effective instructional strategies in America, Direct Instruction and Success For All, allow children to be grouped by skill level in smaller groups for core subjects such as reading without having to reduce class size across the board. Yet, despite overwhelming research suggesting large test score gains, most public schools in the state refuse to adopt them.[115]

Evaluating Smart Start

Smart Start, Gov. Jim Hunt's early childhood development program, was created in 1993 to help get North Carolina preschoolers ready to learn and thus boost educational performance. It was been a successful program from the standpoint of gaining national attention, but until recently its effectiveness as a school-readiness intervention was impossible to estimate. This has not stopped some politicians from proclaiming Smart Start "successful." Last year, for example, Hunt attributed apparent gains in North Carolina reading scores on 1998 national tests to the existence of Smart Start, even though the highest grade that students from Smart-Start supported preschools could have reached by 1998 was third grade and the reading tests was of fourth-graders.[116]

Since early 1998, however, at least four studies have been published of Smart Start's impact on school readiness that can provide fair-minded observers with critical information about the program's effectiveness. Although portrayed by news reports and elsewhere as proving Smart Start's success, the studies, when closely read, suggest a far different conclusion. Indeed, the most recent and most comprehensive study — published in September by the Graham Child Development Center at UNC-Chapel Hill — found that the vast majority of Smart Start expenditures had no statistically significant effect on participants' readiness to learn in kindergarten.

For the new study, researchers picked six counties where there were active Smart Start partnerships and recruited an experimental group of 214 children who had attended a Smart Start-supported child care center as well as a control group of 294 children who had attended child care centers not involved in Smart Start. The researchers then used four measures of readiness to learn: the Kindergarten Teacher Checklist (KTC), the Peabody Picture Vocabulary Test, the Social Skills Rating Scale, and the Social Skills Rating Scale for Problem Behaviors.[117] There were a number of methodological concerns here, and the authors properly cited them. The largest concern was selection bias; children were not randomly assigned to centers with and without Smart Start involvement, thus raising the question of whether subsequent differences were truly due to Smart Start.

Nevertheless, taken at face value the study deals a serious blow to the program's perceived effectiveness. The researchers found no statistically significant differences between children who had attended Smart Start-participating centers and those who didn't. The researchers did find a statistically significant, but small, improvement in some measures for a subgroup of Smart Start participants who attended centers where Smart Start had made expenditures in direct quality improvement. The study also found that, on three of the four measures, the percentage of very low performers decreased for the subgroup vs. the control group. Smart Start's administrators and media reports on the study played up these last results, ignoring the main finding. That was a mistake. As the authors note, 75 percent of Smart Start expenditures fund activities not directly related to child care quality improvement.[118] That means that three-fourths of Smart Start funds have been spent in ways that have been shown not to improve readiness to learn, according to the study.

Furthermore, even for the subgroup of Smart Start children receiving the most attention, gains that were statistically significant were simultaneously so small in magnitude that, based on past experience with preschool intervention programs such as Head Start, they are unlikely to last beyond first or second grade. For example, in the one measurement (the KTC) where the average score for the Smart Start subgroup was truly higher, the gain was only 0.2 points on a 1-to-5 scale (4.4 for the Smart Start Subgroup vs. 4.2 for the control). This is a 5 percentage point gain. As previous studies of Head Start and other preschool programs demonstrate, only very large differences in readiness to learn in kindergarten are likely to persist throughout a child's academic career. Most short-term gains from Head Start, for example, disappear by second grade as the performance of students from similarly disadvantaged backgrounds tend to converge regardless of whether they attended Head Start.[119] Absent any evidence to the contrary — and no studies of Smart Start to date have tracked students into their first or second grades — it would be reasonable to conclude that, based on past research, the few Smart Start recipients who have actually increased their readiness to learn will lose this edge over their peers as they progress through school.

Previous research points to similar conclusions. In 1998, the Graham Center conducted a study of Smart Start in Orange County. A flawed study, since it lacked a true control goup, it still found no statistically significant impact on non-poor children and a modest gain for poor ones.[120] A more valid study was conducted in 1998 in Mecklenburg. It found no statistically significant impact on those who spent a single year in a Smart Start center. It did find a measurable gain for kids who stayed in such a center for three years, but once again, the gain was relatively small.[121] Finally, in early 1999 the Graham Center released a study of 200 Smart Start-supported centers that showed gains in child care quality but no impact on kindergarten readiness.[122]

These four studies, taken together, provide a rationale for reforming the program as follows:

1. Direct Smart Start expenditures should target at-risk children. The 1999 study suggests that, if Smart Start has a measurable impact, it is largely confined to those children who are significantly at-risk. The 1998 Orange County study further identifies poor children as benefiting, albeit modestly, from Smart Start while non-poor children did not. These findings suggest that redirecting scarce resources to poor children and improving the quality of their day care experiences would generate the most educational benefits.

2. Direct relief for families is better than indirect subsidies through Smart Start. As stated earlier, many Smart Start expenditures — for items such as new playground equipment at day care centers and health screenings — do not appear to have a measurable impact on readiness to learn. If, as the study authors suggest, the goal of Smart Start should be expanded to include general improvements in child well-being rather than just readiness to learn, the most efficient policy tool to achieve that would be to convert most Smart Start dollars into an expanded Smart Start Tax Credit for families with preschool children, as the Locke Foundation has previously recommended. In its 1999-2001 alternative budget, for example, Locke proposed a $250 refundable tax credit for each preschool child. Converting existing Smart Start dollars to this purpose would provide significant tax relief to many North Carolina families while still allowing more than $100 million in current funding to be used to increase spending on day care vouchers and improving day care quality for low-income children.

Research Findings on School Choice

By far the most cost-effective way to boost test scores, particularly for disadvantaged students, is to provide them scholarships to attend private or parochial schools. Studies of existing public and private scholarship programs in six cities consistently show large gains in reading and math scores, though the results vary based on student background and the design of the program.[123]

The most recent evidence comes from privately funded scholarship programs in New York City, Washington, Dayton, and Charlotte. In the first three cities, an August 2000 study by researchers at Harvard University, Georgetown University, and the University of Wisconsin found 6 to 9 percentile point gains for scholarship recipients vs. a comparable control group of similarly disadvantaged students who remained in the public schools. Gains were concentrated among African-American recipients, whose parents were far more likely to characterize their previous public schools in negative terms, according to lead researcher Paul Peterson.[124]

In Charlotte, the Children's Scholarship Fund program, administered by the Locke Foundation, was the subject of an August 2000 evaluation by the Manhattan Institute. Researchers led by Dr. Jay Greene, formerly of Harvard and the University of Texas, found a 6 to 7 percentile point gain (or .25 of a standard deviation) for the poor and overwhelmingly African-American scholarship recipients. "To put the gain in perspective," Greene wrote, "the difference between minority and white students nationwide is approximately 1 standard deviation. The benefits observed from the Charlotte CSF program are roughly one-quarter as large at the end of the first year."[125]

In addition to test scores, the Manhattan Institute evaluation relied on surveys of parents and students in both private and public schools. More than half of the parents of Charlotte voucher recipients (53 percent) gave their child's private school an A grade. By comparison, 26 percent of parents whose children remained in the public schools gave their child's public school an A. Choice parents were almost twice as likely to report being very satisfied with virtually all aspects of their children's education, from school safety to the quality of instruction to the teaching of moral values. The trend was particularly clear with regard to safety and discipline. While as many as a third of public school parents reported that fighting, racial conflict, cheating, and tardiness were somewhat or serious problems at their schools, only 12 to 16 percent of choice parents indicated a similar concern.[126]

Among students, surveys revealed that choice significantly improves the learning environment. While nearly a quarter of public school students felt unsafe at their school, only 9 percent of private school students felt the same way. Choice students were far more likely to report that their teachers were "interested in students," listened to them, and were fair to them.

Conclusion

While North Carolina has made some measurable gains in educational outcomes in the past decade, most of the progress occurred before such costly programs as Smart Start and the Excellent School Acts were enacted. Future reform efforts should be directed towards those policies that have proven themselves effective in boosting overall performance and reducing the minority performance gap. State leaders should consider a package of reforms that includes class size reductions for kindergarten, true performance pay for teachers, a more carefully designed Smart Start program, scholarships and tax deductions to expand school choice, and changes to the ABCs program summarized in the next section.

Conclusion and Recommendations

Improve the ABCs Program to Provide More Accountability and Reliability

Accountability is a good thing for public education, and North Carolina's adoption of the ABC accountability plan has been a positive learning experience. The state deserves the recognition it has received for this innovative program. It has taken us a huge step forward. Any suggestions for change in the future should only be designed to strengthen accountability, not dismantle it.

After four years, it is time to review the ABCs program to determine what works and what needs improvement. This report has pointed out some of its weaknesses. Here are some suggestions on how to make it better:

1. Adopt New, Independently-Developed Tests with National and Global Benchmarks.

With the level of attention, emphasis, money and credibility tied to the actual test, we should make sure our test and testing process have integrity and are the best available. It is clear the entire process of test development is flawed and susceptible to manipulation. Given the current system, it is entirely possible the North Carolina tests are of poor quality and are not accurate measures of what children know or should know. This is unacceptable.

The state should ignore critics who say testing is a bad thing and stick to standardized, multiple-choice tests. There is no better way to measure educational achievement. In fact, it should move further in that direction by eliminating the "holistic" writing tests and including multiple-choice items to assess at least a sizable portion of writing skills. Under no circumstances should subjective student portfolios or projects become part of the accountability system. The actual test itself should be outside the control of the state, its politicians and agencies. The only realistic way to do this is to employ an outside professional testing company. There are just two options: use an existing national standardized test or use a company that has developed one of these tests to develop a unique test for us. Either way, there should be more than three versions of the test (the number used now) to reduce the likelihood that old copies of the test can be kept to influence test preparation.

State education leaders probably would oppose the first option on the grounds that North Carolina has unique academic standards. In their view, our test should be developed from our standards. There is truth to this argument. However, this assumes that the standards involved are adequately rigorous and are not influenced by one particular political or philosophical ideology. We don't believe that is the case. This is the same reason that Congress opposed government development of an official national test, and it should be a concern of people of all ideologies. Those who are waiting for a national criterion test that can be given every year will be waiting a long time because that assumes everyone will agree on implementing a common national curriculum. That won't happen in America. The other argument in favor of our own unique test is that it is necessary to make sure that teachers are teaching to the state standards. In our view, this ignores the importance of education leadership in ensuring appropriate curriculum and instruction. If the wrong things are being taught in the classroom, the problem won't be fixed until leadership gets fixed. Under the current system, it appears that the test rather than broader curriculum is the focus anyway.

We favor adopting an off-the-shelf national standardized test like the Iowa Test of Basic Skills or Stanford 9 Achievement Test. North Carolina already has chosen the ITBS as its independent sample every year because it most closely resembles the state's standards. Several states already use these tests, and they are good enough for the best private schools.

It is true that an independent test would not be tied directly to state standards. But the best national tests are also based on standards selected after reviewing the best state standards, the most widely used textbooks and even standards like NAEP.

Consider the advantages of using an independent national test. Tests would be available for every grade, from kindergarten through grade 12. They would be beyond state political or ideological influence. Results could be compared with other public and private school students in the state, nation and the world, providing an independent benchmark for performance. The ITBS is even available with national performance standards similar to NAEP. The national tests would provide greater detail and accuracy in measuring student academic growth below and above grade level than the current state test. More versions of the test could be given to minimize the opportunity to cheat. School districts would not grade their own tests. And the state could easily add new tests like science and history, which we believe should be a priority to make sure these subjects are taught.

The hard costs of an off-the-shelf test might be higher than handling it in house as we do now but less expensive than hiring a company to develop all new tests that would still have some of the drawbacks of the current system. But there would be a tremendous soft cost savings. North Carolina educators could focus on teaching rather than constantly developing and updating new tests and test questions, conserving considerable time and energy. There are 22 states using these kinds of standardized tests.[127]

There are problems with any test you use. Nothing is perfect. The real issue is: how will the test be used? In our view, a test should simply be a snapshot at a given point in time to assess how you are doing and how far you have come. It is important. But it should not become the focus of the entire educational process. And, in a global economy, any test of this nature should allow parents and business owners to compare individual student achievement with other states and nations.

2. Appoint an Independent Review Panel

If the state chooses not to adopt an off-the-shelf test, the legislature should appoint an independent testing review panel comprised of national testing experts. Kentucky's legislature created such a panel last year to provide it with independent, expert testing advice outside of its education bureaucracy. With the level of emphasis on testing in North Carolina, we would be well served to follow Kentucky's example.

3. Clearer, Easier-to-Understand Achievement Labels

Research in our report shows that parents are confused by terms like "expected," "exemplary," and "low-performing." They much prefer traditional letter grades like "A," "B," "C," "D," and "F." Educators don't like these terms. The state of Florida paid attention to this research in developing its new accountability system, which borrows the best from several different states. Florida assigns letter grades to all schools based on absolute achievement. North Carolina should listen to parents and do the same, focusing the grades on absolute achievement rather than growth.

4. Send a Message That All Children Can Learn

Minority students, particularly black children, are not performing well in North Carolina public schools. The accountability system can play an important role in accelerating efforts to close the racial achievement gap. Texas leads the nation in minority student improvement, and most observers point to the way the state measures achievement as the reason. In North Carolina, proficiency scores are averaged together so that districts can score high overall even if one particular race of students is far behind. In Texas, test benchmarks are set as an incentive for schools and districts to raise minority scores. For example, to be rated "exemplary" in Texas, a school must show that 90 percent of whites, blacks, Hispanics and low-income students all pass the test. This requirement is repeated at every rating level. Florida has adopted this idea from Texas. Florida's new A+ Plan for Education,

enacted by new Gov. Jeb Bush, says "School performance includes more than overall student achievement. Schools will also be measured on how well the lowest performing students learn. Schools will not receive passing marks if the lowest performing student are left behind."[128] This incentive has worked in Texas, resulting in wholesale curriculum changes at many schools and a statewide reading initiative. It will also work in North Carolina.

5. Measure Value-Added Growth at the Student and Teacher Level

Growth is an important measure in assessing student achievement, but it should only be considered in the context of growth toward an absolute goal. It is important to know how schools are improving, and it is fine to have a separate reward system for "most improved." However, growth is not a substitute for achievement. Far too many schools and districts have set educational goals based on growth rather than the end result of that growth. In addition, the method by which North Carolina calculates growth is unacceptable. It does not allow principals and teachers to truly measure the value a teacher adds to each child's education every year.

We should be committed to using the best technology and research available in this area. Why should the method our schools use to measure growth be any less sophisticated than the way leading businesses track relationships with customers? The verdict is in, and for all the reasons previously mentioned in this report, North Carolina should adopt the Sanders Value-Added method of assessing growth now used by Tennessee.

The Value-Added system would provide better data for local schools and districts to make critical decisions. The Sanders system is far more precise and fairer to teachers, principals and students than our current system. It will provide reliable data to teachers and principals about instructional strengths and weaknesses. With at least three years of historical data, we could use testing information as part of individual teacher performance reviews and merit pay plans. Rather than giving bonuses to everyone in a school based on an average score (as we do now), we could identify high performing teachers in low performing schools or low performing teachers in high performing schools. We would be able to determine the positive or negative effects of a prior teacher, which is a fairer assessment of a student's current teacher.

In addition, we should adopt an element of the Texas accountability system that uses growth as a tool for helping schools get better. Under this strategy, called "comparable improvement," schools are divided into "campus comparison groups" of 40 schools that share similar characteristics. The groups are then divided into four subgroups so that movement between quartiles can be measured. For example, schools that are urban and have high percentages of students on free-or-reduced lunch and comparable achievement would be put into the same group. These groups may change over time, but they serve as a benchmarking tool for principals and superintendents to compare their schools with similar ones. This allows lower-performing schools in a peer group to seek out better performing schools in the same group (in other parts of the state) for improvement ideas. This strategy has been found highly effective in many businesses with multiple locations that serve customers and markets with different characteristics, including retailers and banks. It would cost virtually nothing, would encourage innovation and would be totally transparent to the public.

6. Include Choice as an Accountability Incentive and Consequence

One critical component of accountability that is missing from the current system has to do with parents. Since publicly published test scores are designed to provide parents with more information about the quality of schools, parents should have power to act on that information—especially if their children are in poorly performing schools or school districts. One or both of the following reforms could marry ABC results with school choice.

One would be to provide scholarship assistance to the poorest 50 percent of students in the state's 25 worst-performing districts on state tests. Our preliminary analysis of this approach found that some 74,000 students in North Carolina would be eligible for scholarships using this model. If the scholarships averaged $3,500 a year

— more than enough to pay the average tuition at a private school — and two-thirds of eligible students took the scholarships, the cost to the state would be approximately $174 million. On the other hand, if each departing student cost their public school district just half the normal operating and capital cost per pupil, the state would save $102 million a year. Local governments would save another $34 million, making the program modest in cost but potentially dramatic in outcomes, both for students transferring to private schools and for those remaining in a public school system that would feel significant competitive pressure for the first time.

A similar approach would focus on schools rather than districts. If the poorest half of students at public schools where fewer than 50 percent are at grade level were given $3,500 scholarships to attend private schools, and as many as two-thirds of the eligible students chose to do so, the cost to taxpayers would be inconsequential but educational opportunity would be vastly expanded for students in North Carolina's most troubled schools.

Conclusion

The standards and accountability reform movement in education began in the late 1980s with the formation of the National Education Goals Panel and Goals 2000. Ten years later, none of the goals set by President Bush and the nation's governors have been achieved. We have come close to none of them. Clearly, we have learned that it is important to set goals and measure results. But we must admit the limitations of this approach to transforming our state's schools.

Any well-run organization knows it must measure results. North Carolina's public education system is like an old family business that has always had a total monopoly on its market. It never really had to worry about its efficiency or profit. Whenever things got tight, the old man who owned the business (or the taxpayers in the case of schools) always kicked in extra money. Thus, the lazy managers of the business never bothered to count the bottom line. But one day, the industry started to change. Customers began waking up and realizing they weren't getting the value they expected and for which they were paying. The business decided to begin counting its money and seeing how its various units were measuring up. It began to reward employees and have contests for performance.

This is what has happened with the ABCs program in North Carolina. For the first time, we are actually holding people and schools accountable for results (although the methods need improvement). But, ultimately, businesses that stop here fail and are forced to file bankruptcy as their market changes. Most North Carolina businesses don't think accounting or employee bonus systems are real business strategies. They are essential for organizational success. But they understand survival depends on having a variety of products that add value better than competitors; competent, well-trained workers; and an efficient delivery system. Accountability for North Carolina schools is a good start, but real and faster change won't begin to happen without more fundamental structural changes in our education system, including the introduction of real choice and competition.

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School District	State PPE 1998-99	Fed. PPE 1998-99	Local PPE 1998-99	Total Op. Spending	Capital PPE 5-Yr Avg.	Total Spending	% Needy	County Per Capita Income	1999-00 ADM Enroll
Alamance	$3,783	$373	$1,227	$5,382	$485	$5,867	36.1%	$24,836	19,364
Alexander	$4,135	$331	$898	$5,365	$360	$5,724	25.5%	$21,298	5,229
Alleghany	$5,731	$669	$1,091	$7,491	$288	$7,778	43.1%	$23,687	1,441
Anson	$4,476	$742	$912	$6,130	$513	$6,643	64.8%	$20,496	4,419
Ashe	$4,693	$518	$1,034	$6,244	$1,221	$7,465	46.8%	$20,161	3,220
Avery	$5,058	$686	$1,457	$7,201	$407	$7,608	46.9%	$22,328	2,420
Beaufort	$4,333	$694	$1,183	$6,210	$685	$6,895	50.7%	$20,340	7,310
Bertie	$4,699	$1,094	$678	$6,471	$148	$6,619	79.4%	$18,497	3,760
Bladen	$4,550	$757	$955	$6,261	$310	$6,571	60.6%	$19,908	5,678
Brunswick	$4,184	$514	$1,567	$6,265	$711	$6,976	43.9%	$19,731	9,737
Buncombe	$4,024	$339	$1,416	$5,779	$577	$6,356	29.8%	$25,998	25,543
Asheville	$4,428	$657	$2,855	$7,940	$579	$8,519	45.2%	-	4,212
Burke	$3,993	$400	$948	$5,341	$456	$5,796	37.7%	$20,644	14,034
Cabarrus	$3,729	$252	$1,140	$5,121	$219	$5,340	21.9%	$26,480	17,790
Kannapolis	$4,255	$502	$1,186	$5,943	$902	$6,845	47.9%	-	3,909
Caldwell	$4,094	$361	$987	$5,442	$528	$5,970	35.5%	$22,060	12,093
Camden	$5,313	$365	$736	$6,414	$724	$7,138	26.4%	$19,679	1,268
Carteret	$4,120	$468	$2,119	$6,707	$1,170	$7,877	35.5%	$23,442	8,296
Caswell	$4,812	$487	$983	$6,282	$122	$6,403	42.3%	$18,463	3,474
Catawba	$3,761	$280	$1,292	$5,334	$783	$6,117	25.4%	$27,157	15,303
Hickory	$4,179	$439	$1,288	$5,905	$526	$6,432	47.5%	-	4,278
Newton-Con	$4,686	$470	$1,390	$6,547	$640	$7,187	35.8%	-	2,725
Chatham	$4,121	$364	$1,697	$6,182	$793	$6,976	32.8%	$27,489	6,724
Cherokee	$4,924	$717	$833	$6,473	$1,535	$8,008	51.1%	$17,469	3,420
Chowan	$4,772	$482	$1,067	$6,321	$701	$7,022	55.3%	$21,238	2,541
Clay	$5,399	$454	$911	$6,764	$806	$7,570	33.1%	$18,861	1,254
Cleveland	$4,103	$402	$991	$5,495	$312	$5,807	33.1%	$21,126	9,109
Kings Mountain	$4,273	$385	$1,319	$5,976	$197	$6,173	36.7%	-	4,322
Shelby	$4,438	$869	$1,449	$6,757	$350	$7,107	50.7%	-	3,288
Columbus	$4,445	$725	$757	$5,926	$180	$6,106	68.0%	$20,046	7,284
Whiteville	$4,579	$724	$824	$6,127	$365	$6,492	58.4%	—	2,738
Craven	$4,063	$602	$1,029	$5,694	$528	$6,222	44.3%	$23,527	14,541
Cumberland	$3,834	$511	$1,014	$5,359	$521	$5,880	50.3%	$24,104	50,335
Currituck	$4,387	$408	$1,917	$6,712	$1,566	$8,278	26.4%	$22,162	3,087
Dare	$4,097	$256	$1,941	$6,294	$242	$6,536	20.0%	$23,096	4,479
Davidson	$3,946	$260	$989	$5,195	$408	$5,603	20.7%	$23,034	18,332
Lexington	$4,202	$663	$1,695	$6,560	$316	$6,876	64.7%	—	3,139
Thomasville	$4,313	$786	$1,616	$6,715	$382	$7,097	67.1%	—	2,311
Davie	$4,086	$258	$1,270	$5,614	$560	$6,175	23.1%	$27,937	5,312
Duplin	$4,132	$531	$689	$5,352	$557	$5,908	54.9%	$20,574	8,389
Durham	$4,051	$427	$2,355	$6,833	$404	$7,237	40.1%	$28,492	28,494
Edgecombe	$4,315	$753	$1,009	$6,076	$138	$6,214	61.6%	$19,349	7,681
Forsyth	$4,084	$373	$1,875	$6,332	$662	$6,994	36.5%	$31,304	42,105
Franklin	$4,048	$481	$1,037	$5,565	$980	$6,545	45.4%	$20,932	7,213
Gaston	$3,987	$381	$1,161	$5,530	$590	$6,120	34.7%	$23,210	29,524
Gates	$5,063	$509	$1,113	$6,685	$1,457	$8,142	52.1%	$17,775	2,027
Graham	$5,854	$850	$843	$7,547	$307	$7,854	49.6%	$16,877	1,186
Granville	$4,029	$466	$1,128	$5,623	$391	$6,014	40.3%	$21,007	7,732
Greene	$4,859	$949	$705	$6,513	$505	$7,018	61.7%	$18,001	2,868
Guilford	$3,984	$396	$1,871	$6,251	$502	$6,754	39.7%	$29,229	60,322
Halifax	$4,760	$951	$764	$6,475	$624	$7,099	83.6%	$18,357	6,084
Roanoke Rapids	$4,215	$414	$1,465	$6,093	$906	$7,000	37.8%	—	3,114
Weldon	$5,123	$1,259	$1,469	$7,851	$252	$8,103	77.3%	—	1,134
Harnett	$4,076	$466	$782	$5,324	$865	$6,189	48.0%	$19,129	15,350
Haywood	$4,346	$419	$1,358	$6,123	$729	$6,852	33.9%	$21,494	7,542
Henderson	$4,130	$350	$1,319	$5,800	$377	$6,177	30.6%	$26,115	11,251
Hertford	$4,224	$844	$835	$5,903	$378	$6,282	68.0%	$17,626	4,079
Hoke	$4,319	$621	$528	$5,468	$305	$5,773	58.1%	$13,582	6,057

NOTES: PPE=per pupil expenditures; capital spending is rolling 5-yr average; % needy refers to eligibility for free/reduced lunch

School District	State PPE 1998-99	Fed. PPE 1998-99	Local PPE 1998-99	Total Op. Spending	Capital PPE 5-Yr Avg.	Total Spending	% Needy	County Per Capita Income	1990-00 ADM Enroll
Hyde	$7,525	$1,328	$1,416	$10,268	$2,204	$12,473	71.0%	$18,157	748
Iredell	$3,899	$332	$1,311	$5,543	$660	$6,203	31.1%	$34,382	15,986
Mooresville	$3,681	$262	$1,211	$5,154	$979	$6,133	23.4%	—	3,763
Jackson	$4,436	$557	$1,236	$6,229	$352	$6,582	39.2%	$20,777	3,512
Johnston	$3,916	$352	$1,195	$5,463	$1,046	$6,510	36.4%	$23,288	19,150
Jones	$5,762	$973	$697	$7,431	$768	$8,199	70.0%	$19,160	1,550
Lee	$3,990	$559	$1,135	$5,684	$875	$6,560	43.3%	$24,563	8,618
Lenoir	$4,202	$603	$973	$5,778	$306	$6,084	51.6%	$21,287	10,181
Lincoln	$3,942	$331	$885	$5,158	$789	$5,948	29.5%	$21,422	10,124
Macon	$4,410	$429	$1,240	$6,079	$355	$6,434	42.6%	$19,522	3,933
Madison	$5,073	$598	$803	$6,473	$229	$6,702	45.7%	$21,191	2,525
Martin	$4,405	$700	$1,128	$6,232	$296	$6,529	59.2%	$18,599	4,934
McDowell	$4,178	$400	$882	$5,460	$128	$5,588	34.6%	$18,657	6,306
Mecklenburg	$3,879	$386	$2,191	$6,456	$1,115	$7,572	37.2%	$35,245	97,231
Mitchell	$4,872	$469	$609	$5,950	$321	$6,271	51.4%	$19,449	2,390
Montgomery	$4,360	$642	$1,065	$6,067	$202	$6,269	77.6%	$19,789	4,312
Moore	$3,989	$436	$1,420	$5,845	$403	$6,247	37.2%	$28,493	10,768
Nash	$4,093	$504	$1,233	$5,830	$569	$6,399	51.8%	$23,572	17,442
New Hanover	$4,003	$392	$1,848	$6,243	$732	$6,975	36.2%	$26,346	21,101
Northampton	$4,699	$840	$816	$6,356	$303	$6,659	75.7%	$18,452	3,774
Onslow	$3,879	$482	$890	$5,251	$789	$6,040	39.8%	$22,109	20,866
Orange	$4,143	$288	$2,453	$6,884	$914	$7,798	24.7%	$28,256	6,024
Chapel Hill	$3,964	$272	$3,187	$7,423	$1,622	$9,045	17.8%	—	8,516
Pamlico	$5,639	$664	$846	$7,148	$754	$7,902	49.7%	$21,256	1,817
Pasquotank	$4,139	$653	$1,087	$5,879	$1,052	$6,931	57.9%	$19,581	6,092
Pender	$4,078	$484	$1,107	$5,669	$845	$6,514	50.7%	$18,535	6,309
Perquimans	$5,241	$788	$914	$6,944	$1,140	$8,084	57.4%	$17,609	1,854
Person	$4,014	$457	$1,135	$5,606	$163	$5,769	40.0%	$20,990	5,736
Pitt	$4,088	$492	$1,095	$5,675	$286	$5,960	47.1%	$22,772	19,531
Polk	$4,767	$360	$1,625	$6,751	$164	$6,915	36.0%	$28,614	2,253
Randolph	$3,962	$301	$925	$5,187	$698	$5,885	27.7%	$22,622	16,141
Asheboro	$3,965	$388	$1,382	$5,735	$470	$6,205	38.8%	—	4,209
Richmond	$4,404	$622	$719	$5,746	$328	$6,074	58.3%	$18,845	8,209
Robeson	$4,188	$757	$540	$5,485	$178	$5,663	73.3%	$17,179	23,394
Rockingham	653821.06	$473	$1,150	$5,769	$412	$6,181	36.6%	$20,866	14,249
Rowan	$3,957	$405	$1,156	$5,517	$752	$6,270	36.7%	$21,594	19,643
Rutherford	$4,249	$455	$1,054	$5,758	$477	$6,235	41.6%	$20,183	9,993
Sampson	$4,304	$630	$777	$5,711	$307	$6,017	60.2%	$19,880	7,497
Clinton	$4,363	$642	$1,057	$6,062	$529	$6,591	53.7%	—	2,519
Scotland	374147.11	$691	$1,232	$6,394	$505	$6,899	60.5%	$19,026	6,872
Stanly	$4,051	$345	$984	$5,381	$469	$5,850	31.3%	$21,689	10,016
Stokes	$4,263	$367	$1,262	$5,891	$1,035	$6,926	25.8%	$20,714	6,961
Surry	$4,212	$440	$1,170	$5,822	$544	$6,367	37.3%	$21,939	8,037
Elkin	$4,802	$442	$1,772	$7,016	$273	$7,290	20.5%	-	1,071
Mount Airy	$4,354	$378	$1,686	$6,418	$848	$7,267	38.5%	-	2,040
Swain	$5,329	$1,076	$478	$6,883	$398	$7,281	58.2%	$16,156	1,662
Transylvania	$4,113	$391	$1,340	$5,843	$716	$6,559	31.4%	$23,378	3,867
Tyrrell	$6,792	$893	$946	$8,631	$828	$9,460	61.5%	$15,475	784
Union	$3,846	$298	$1,196	$5,341	$330	$5,670	28.0%	$22,277	20,504
Vance	$4,150	$653	$1,166	$5,969	$539	$6,508	65.5%	$19,008	7,749
Wake	$3,895	$259	$1,724	$5,878	$1,419	$7,296	21.5%	$33,780	91,121
Warren	$4,678	$721	$1,011	$6,410	$746	$7,157	66.9%	$15,874	3,187
Washington	464716.66	$856	$841	$6,806	$169	$6,975	25.9%	$18,366	2,475
Watauga	$4,235	$402	$1,263	$5,900	$324	$6,224	37.2%	$20,996	4,793
Wayne	$4,084	$565	$789	$5,439	$367	$5,805	46.8%	$19,710	18,896
Wilkes	$4,270	$410	$1,170	$5,850	$333	$6,183	37.2%	$22,014	9,761
Wilson	$4,015	$590	$1,286	$5,890	$504	$6,394	54.5%	$23,823	11,747
Yadkin	$4,212	$363	$1,084	$5,658	$390	$6,049	28.6%	$21,860	5,633
Yancey	$4,972	$510	$917	$6,399	$557	$6,956	39.4%	$18,308	2,499
State Avg/Tot	$4,087	$446	$1,367	$5,899	$658	$6,557	39.8%	$25,181	1,221,746

NOTES: PPE=per pupil expenditures; capital spending is rolling 5-yr average; % needy refers to eligibility for free/reduced lunch