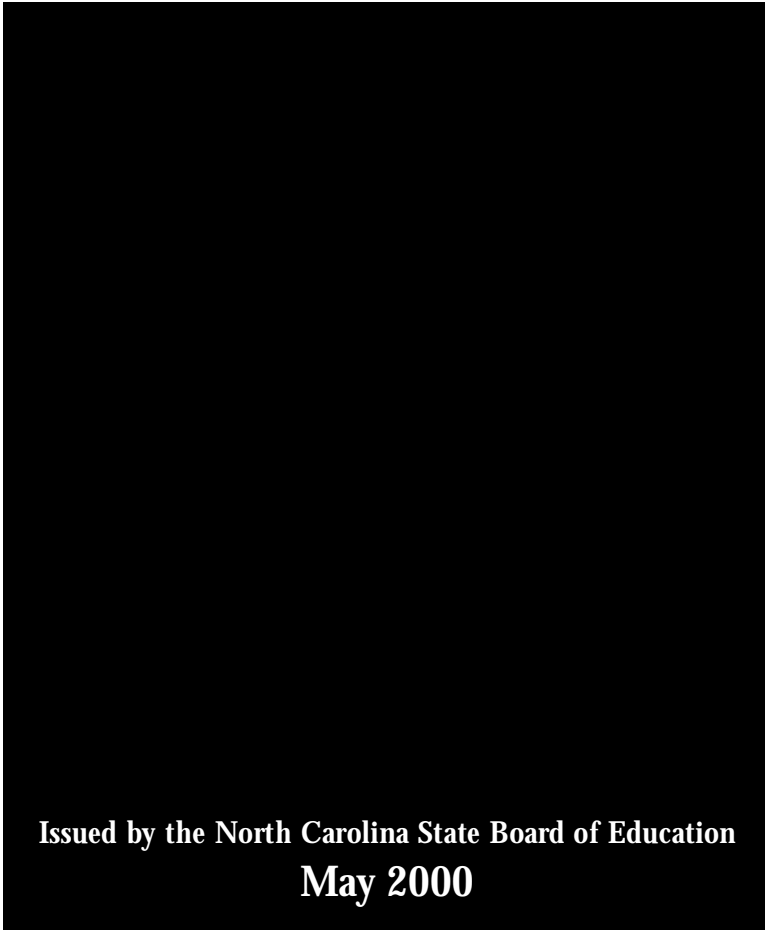




State of the State

Education Performance
in North Carolina, 1999



Issued by the North Carolina State Board of Education
May 2000

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Introduction

This is the eighth issue of the *State of the State--Educational Performance in North Carolina*. The report originated pursuant to the School Improvement and Accountability Act enacted by the General Assembly of North Carolina in 1989. One of several annual reports used to evaluate the state's public school system, the *State of the State* serves three major purposes: One is to assist policymakers in gauging the status and progress of student achievement in North Carolina's schools. Another is to permit comparison of North Carolina student achievement with that of students throughout the nation. A third is to apprise the public of the state's student achievement. Similar to other reports that evaluate North Carolina's public schools, the *State of the State* report cites student performance as a primary indicator of the extent to which the state's schools are meeting the educational needs of its students.

The 1999 edition of *State of the State* comprises three sections:

Section 1. North Carolina Performance and National Standards addresses North Carolina student performance in relation to national standards and compares the state's results to those of other states on the National Assessment of Educational Progress, the Iowa Tests of Basic Skills, and the Scholastic Assessment Test. It also highlights the performance of North Carolina students on Advanced Placement Program examinations.

Section 2. North Carolina's Performance and State Standards summarizes the 1999 ABCs growth/gain results for the state's elementary, middle, and high schools. Trends in average statewide growth/gain and achievement levels over time are included. Statewide test results and other trends are also included.

Section 3. Closing the Gap in Student Performance presents current trends in statewide and national performance of different racial/ethnic and gender groups on most of the measures reported in Sections 1 and 2. Particular emphasis is placed on discerning changes in the performance gap between minority and white students over time.

A major purpose of this report is to collect and summarize information on North Carolina's student achievement within a single publication for the convenience of the readership. In meeting this goal, some data in this report may have been presented previously in other publications.

May 2000

Section 1. North Carolina's Performance and National Standards

Background

The North Carolina statewide testing program has used state-developed tests to assess the academic achievement of the state's students since 1985-86, with the first administration of the Algebra I End-of-Course (EOC) test. Currently, in addition to Algebra I, ten other high school tests (Algebra II, Biology, Chemistry, ELPS, English I, English II, Geometry, Physical Science, Physics, and U. S. History) are administered annually as part of the statewide testing program. The first End-of-Grade (EOG) tests were administered in the 1992-93 school year in an effort to establish assessment strategies that were more rigorous than the previously used California Achievement Tests. The tests currently in use are closely aligned with the mandated state curriculum and national standards and are designed to assess higher order thinking skills.

Because the state curriculum and end-of-grade tests permit the tracking of student performance over a period of years (grades 3-8), a school accountability model based upon student growth can be implemented. Such a model, the ABCs of Public Education, was adopted by the State Board of Education. The ABCs, North Carolina's principal school improvement effort, emphasizes Accountability for teaching and learning the Basics; it also promotes and encourages maximum local Control.

North Carolina's educators and citizens are not only interested in the levels at which the state's public schools perform, they are also interested in how these levels compare with those of other public school systems throughout the nation. One of the purposes of the *State of the State* report is to facilitate such comparisons.

The 1998 results of the National Assessment of Educational Progress (NAEP) writing assessment are presented first, followed by results of the nationally norm-referenced Iowa Tests of Basic Skills (ITBS). These tests provide the best data available for comparing North Carolina's student performance to that of students nationwide. Next, results of the Scholastic Assessment Test (SAT) are presented. The SAT is not the best measure for comparing North Carolina's students to students nationally, for reasons to be discussed later. However, it is recognized as one of the most useful tools for assessing individual students' academic preparation for post-secondary education. Consequently, national and state results for 1999 and previous years are included. Finally, state results from the Advanced Placement (AP) examinations are reported, because they also reflect students' academic preparation for post-secondary education.

National Assessment of Educational Progress (NAEP)

Background

The National Assessment of Educational Progress (NAEP), a federally mandated project, was established in 1969 to assess the educational achievement of elementary and secondary students in various subject areas. NAEP, sometimes called the “Nation’s Report Card,” is the most widely recognized effort to assess the knowledge of American students. It reports on the educational achievement of populations of students; it is not designed to produce information for individual students, teachers, schools or school districts. Every two years, NAEP assesses nationally representative samples of more than 120,000 students in public and private schools in grade 4, grade 8, and grade 12. The academic subjects assessed by NAEP, which vary from year to year, include reading, mathematics, science, writing, history, geography, and the arts.

State NAEP assessments began in 1990 in response to legislation passed by Congress. This legislation authorized a voluntary Trial State Assessment (TSA) wherein representative samples of students from each jurisdiction agreeing to participate are selected. The sampling process is designed to ensure that reliable state-level data are obtained regarding student achievement in each participating jurisdiction. Approximately 2500 students per grade are tested statewide. The Trial State Assessment Program included grade 8 mathematics in 1990, 1992, and 1996; grade 4 mathematics in 1992 and 1996; grade 4 reading in 1992, 1994, and 1998; and, grade 8 science in 1996.

Although the legislation still emphasizes that the state assessments are developmental, "Trial" was dropped from the title of the assessment in 1996 based on numerous evaluations of the TSA program. The 1998 state NAEP assessed writing at grade 8 and reading at grades 4 and 8.

NAEP uses scale scores ranging from 0 to 300 to assess student performance in science and writing and 0 to 500 in mathematics and reading. The scales summarize results across all three grades. In addition to scale scores, NAEP uses achievement levels to report results. Achievement levels are performance standards regarding what students should be expected to know and to do. NAEP’s achievement level definitions are listed in Table 1.

Table 1. Definitions of the National Assessment of Educational Progress (NAEP) Achievement Levels

| | |
|-------------------|---|
| Basic | This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade. |
| Proficient | This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter. |
| Advanced | This level signifies superior performance. |

Although achievement levels for NAEP have been required by law since 1988 (Public Law 100-297), the National Center for Education Statistics (U. S. Department of Education, 1999) has issued the following caution when interpreting NAEP achievement level data:

Upon review of the available information, the Acting Commissioner of Education Statistics agrees with the National Academy of Science (NAS) recommendation that caution needs to be exercised in the use of the current achievement levels, since in the opinion of the Academy "... appropriate validity evidence for the cut scores is lacking; and the process has produced unreasonable results." (Pilligrino et al., 1999, p. 182.) Therefore, the Acting Commissioner concludes that these achievement levels should continue to be considered developmental and should continue to be interpreted and used with caution.... The Acting Commissioner and the Governing Board believe that the achievement levels are useful for reporting trends in the educational achievement of students in the United States.

NAEP results for North Carolina, the Southeast and the Nation from 1990 to 1998 are reported below. In addition, Table 3 provides a summary of average scale scores in reading, writing, mathematics, and science for North Carolina, the Southeast and the Nation from 1990 to 1998.

Further information on NAEP can be obtained at the following web site:
<http://nces.ed.gov/nationsreportcard/site/home.asp/>.

Results of NAEP assessments in North Carolina through 1998, except the 1998 Writing assessment, were presented in previous *State of the State* reports. The 1998 NAEP writing results, which were not released early enough to be included in the 1998 *State of the State*, are presented in this report. No NAEP assessments were administered in North Carolina in 1999. In 2000, NAEP assessments of Mathematics and Science are scheduled for North Carolina's grades 4 and 8 students. These results will be presented in the 2001 *State of the State* report.

Grade 8 - Writing

Figure 1 shows the average writing scale scores for grade 8 students and Table 2 shows the percentages of public school grade 8 students attaining NAEP's writing achievement levels in North Carolina, the Southeast and the Nation on the National Assessment of Educational Progress (NAEP) in 1998.

In the first ever NAEP assessment of Writing in North Carolina, the average scale score for the state's eighth graders (150) exceeded the national average (148) by two points and the Southeast average (143) by seven points. The 1998 results are consistent with those of the state-level assessments used in the ABCs School Based Accountability Program, which have shown consistent gains in grades 4 and 7 writing proficiency since the ABCs began in 1996.

In regard to achievement levels, the percentage of North Carolina's grade 8 students at or above the *basic* achievement level (85 percent) was higher than for the Southeast (81 percent) and for the Nation (83) as shown in Table 2. Also, a higher percentage of North Carolina's grade 8 students was at or above the NAEP *proficient* level (27 percent) than for the Nation (24 percent) and for the Southeast (19 percent).

Figure 1. Average Writing Scale Scores for Grade 8 Students in North Carolina, the Southeast, and the Nation on the National Assessment of Educational Progress (NAEP), 1998.

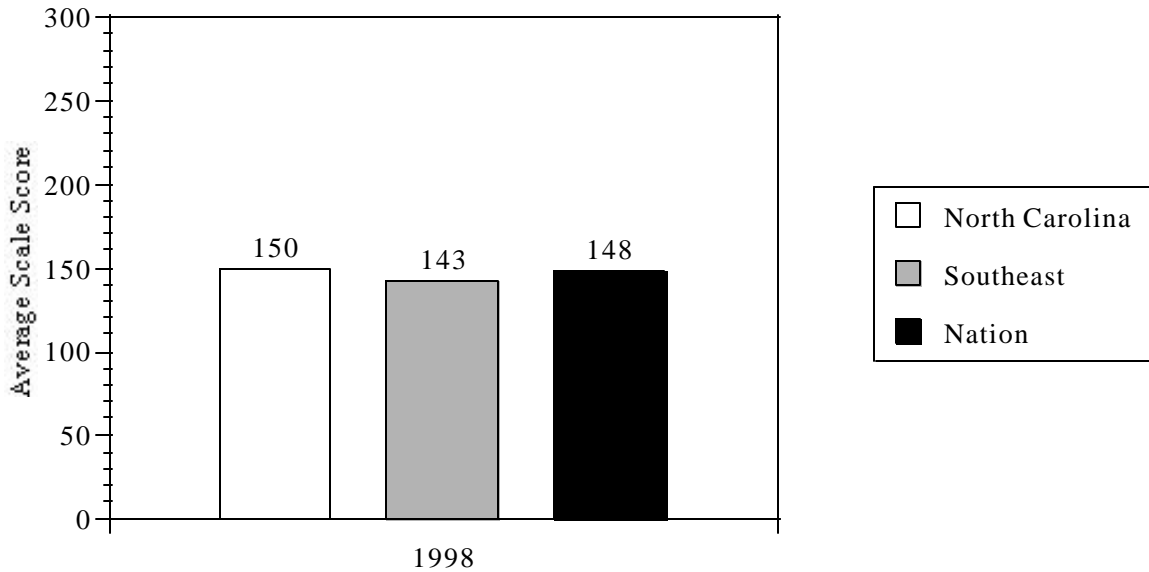


Table 2. Percentages of Public School Grade 8 Students Attaining the National Assessment of Educational Progress (NAEP) Writing Achievement Levels in North Carolina, the Southeast, and the Nation, 1998

| | Below Basic | At or Above Basic | At or Above Proficient | Advanced |
|----------------|--------------------|--------------------------|-------------------------------|-----------------|
| North Carolina | 15 (1.2) | 85 (1.2) | 27 (1.7) | 1 (0.4) |
| Southeast | 19 (1.2) | 81 (1.2) | 19 (2.0) | 1 (0.2) |
| Nation | 17 (0.5) | 83 (0.5) | 24 (0.8) | 1 (0.1) |

The achievement levels correspond to the following points on the NAEP writing Scale at grade 8: *Basic*, 114-172; *Proficient*, 173-223; and *Advanced*, 224 and above. The standard errors of the statistics appear in parentheses.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 Writing Assessment.

NAEP Trends

A summary of NAEP results in reading, writing, mathematics, and science from 1990 to 1998 shows that North Carolina's grades 4 and 8 students have equaled or exceeded the performances of their counterparts in the Southeast and the Nation in recent years (see Table 3). These results may reflect the aligning of the North Carolina curriculum with national standards, the focusing of classroom instruction on the new curriculum, the development of a highly aligned assessment system, and the evolution of high stakes accountability standards for schools and school districts in the state.

Table 3. Summary of the National Assessment of Educational Progress (NAEP) Average Scale Scores in Reading, Writing, Mathematics, and Science for North Carolina, the Southeast and the Nation, 1990-1998

| | Average Scale Scores | | | | |
|--------------------------|----------------------|------|------|------|------|
| | 1990 | 1992 | 1994 | 1996 | 1998 |
| <u>Reading (Grade 4)</u> | | | | | |
| North Carolina | | 212 | 214 | | 217 |
| Southeast | | 211 | 208 | | 210 |
| Nation | | 215 | 212 | | 215 |
| <u>Reading (Grade 8)</u> | | | | | |
| North Carolina | | | | | 264 |
| Southeast | | | | | 258 |
| Nation | | | | | 261 |
| <u>Writing (Grade 8)</u> | | | | | |
| North Carolina | | | | | 150 |
| Southeast | | | | | 143 |
| Nation | | | | | 148 |
| <u>Math (Grade 4)</u> | | | | | |
| North Carolina | | 213 | | 224 | |
| Southeast | | 210 | | 216 | |
| Nation | | 219 | | 222 | |
| <u>Math (Grade 8)</u> | | | | | |
| North Carolina | 250 | 258 | | 268 | |
| Southeast | 254 | 259 | | 264 | |
| Nation | 262 | 267 | | 271 | |
| <u>Science (Grade 8)</u> | | | | | |
| North Carolina | | | | 147 | |
| Southeast | | | | 141 | |
| Nation | | | | 148 | |

Iowa Tests of Basic Skills (ITBS)

Background

In 1992, the State Board of Education approved the Iowa Tests of Basic Skills (ITBS) Survey Battery for use in the North Carolina testing program. A major reason for adopting the ITBS was to facilitate the comparison of North Carolina's student achievement with national indicators. The ITBS has been administered annually in North Carolina to representative samples of students in grades 5 and 8 since the spring of 1993. Approximately 2500 students are tested statewide per grade and no school or school system scores are available. The ITBS was adopted in lieu of the previously used California Achievement Tests (CAT) for several reasons. Among the reasons were: (1) it was more closely aligned with the mandated statewide curriculum, (2) it placed greater emphasis on higher-order thinking skills, and (3) it was more closely aligned with national curriculum standards.

The components of the ITBS Survey Battery are Reading, Language, and Mathematics. The Reading Test consists of two parts, Vocabulary and Reading Comprehension. While the Reading Total Skills score is based on the entire test, the Reading Advanced Skills score is based only on Reading Comprehension items.

The Language test consists of five parts: Spelling, Capitalization, Punctuation, Usage, and Expression. The Language Total score includes all five parts, and the Language Advanced Skills score is based on two parts, Usage and Expression.

The Mathematics test includes four parts (Concepts, Estimation, Problem Solving, and Data Interpretation) and an optional computation test. The Mathematics Total score is based on all five parts; the Mathematics Advanced Skills score is based on the Estimation, Problem Solving, and Data Interpretation parts.

Each student's Survey Battery Total score was calculated by averaging each student's standard score for the three tests. For example, averaging the Reading Total, Language Total, and Mathematics Total standard scores yields the Survey Battery Total standard score for each student.

The score types usually reported in ITBS reports are: Mean Standard Score, Grade Equivalent of Average Standard Score, Median Standard Score, Median National Percentile Rank, and Normal Curve Equivalent (NCE). ITBS results are reported below as median National Percentile Ranks (NPRs) of the developmental standard scores and are referenced to 1995 ITBS national student norms. NPRs permit the comparison of North Carolina's students with representative groups of students in the nation. When interpreting results from various sources, one should ensure that similar types of scores are being compared, since the different types of scores are not directly comparable.

Statewide Performance

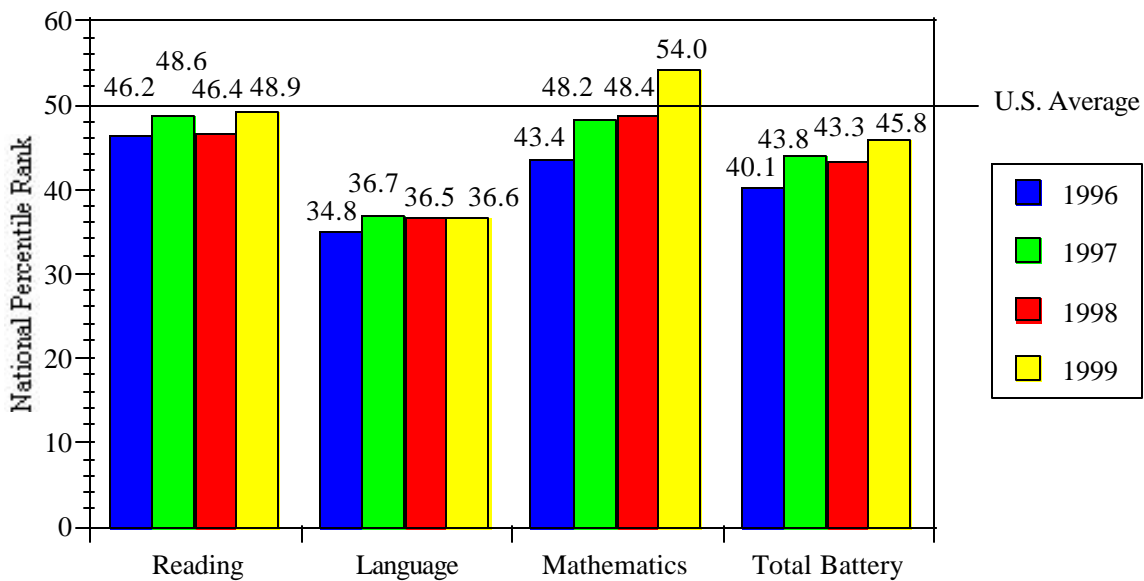
Grade 5 (Total Skills)

The NPRs in Total Skills for North Carolina's grade 5 students on the ITBS from 1996 to 1999 are shown in Figure 2. Grade 5 students scored higher in all skill areas in 1999 than in the three previous years. The most dramatic progress was in Mathematics Total Skills, where grade 5 students surpassed the U. S. average (50 percent) and have improved by more than ten points since 1996.

In Reading Total Skills, Grade 5 students showed notable progress, scoring 2.5 points higher than in the previous year and just one point below the U. S. average.

In Language Total Skills, Grade 5 students continued to score below the U. S. average.

Figure 2. National Percentile Ranks (NPRs) in Total Skills for North Carolina's Grade 5 Students on the Iowa Tests of Basic Skills (ITBS), 1996-1999¹.



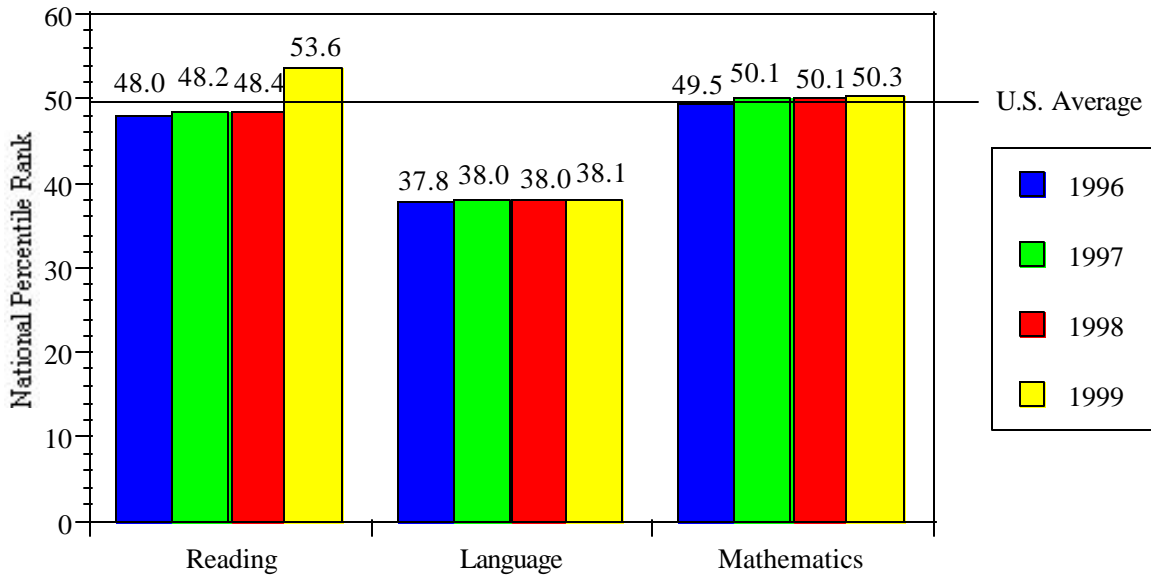
¹Without mathematics computation; referenced to 1995 national student norms.

Grade 5 (Advanced Skills)

The NPRs in Advanced Skills for North Carolina's grade 5 students on the ITBS from 1996 to 1999 are shown in Figure 3. Grade 5 students made progress in all Advanced Skills areas in 1999. The greatest progress was in Reading, with Grade 5 students improving by 5.2 points over the previous year and by 5.6 points since 1996.

In 1999, Reading and Mathematics Advanced Skills scores were above the national average, while the Language Advanced Skills score remained considerably below the U.S. average (50 percent).

Figure 3. National Percentile Ranks (NPRs) in Advanced Skills for North Carolina’s Grade 5 Students on the Iowa Tests of Basic Skills (ITBS), 1996-1999¹.



¹Referenced to 1995 national student norms.

Grade 8 (Total Skills)

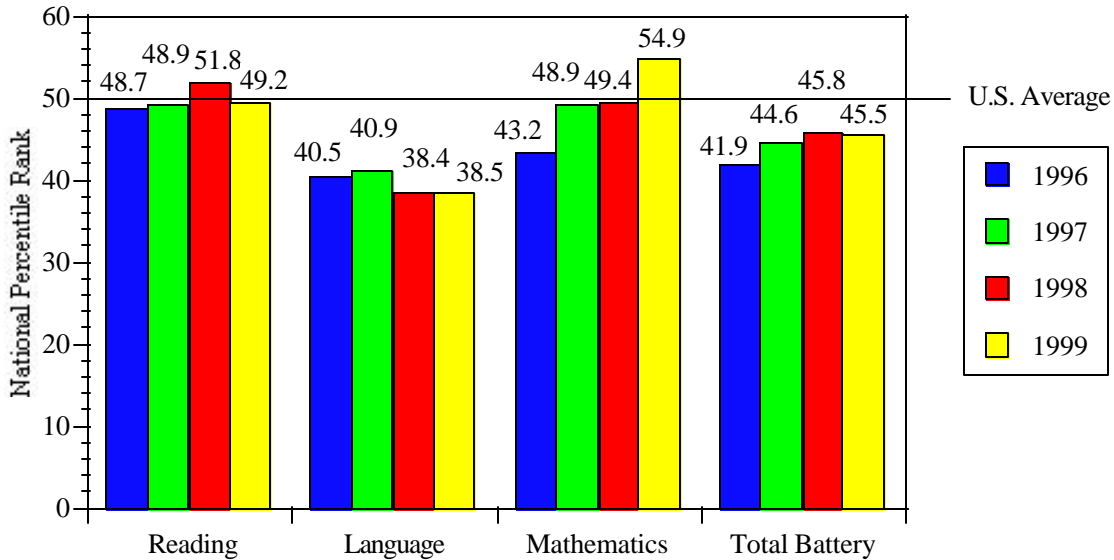
The NPRs in Total Skills for North Carolina’s grade 8 students on the ITBS from 1996 to 1999 are shown in Figure 4. While the performance of grade 8 students has fluctuated in reading and language since 1996, grade 8 students’ performance in mathematics has improved progressively over the same period.

In 1999, North Carolina’s grade 8 students made significant progress in Mathematics Total Skills, improving by 5.5 points over the previous year and surpassing the U. S. average (50 percent) by nearly five points.

In Reading Total Skills, Grade 8 students, while scoring near the U. S. average in 1999, scored 2.6 points lower than in the previous year.

In Language Total Skills, the performance of Grade 8 students in 1999 was consistent with the previous year’s score, and remained markedly below the U. S. average.

Figure 4. National Percentile Ranks (NPRs) in Total Skills for North Carolina’s Grade 8 Students on the Iowa Tests of Basic Skills (ITBS), 1996-1999¹.



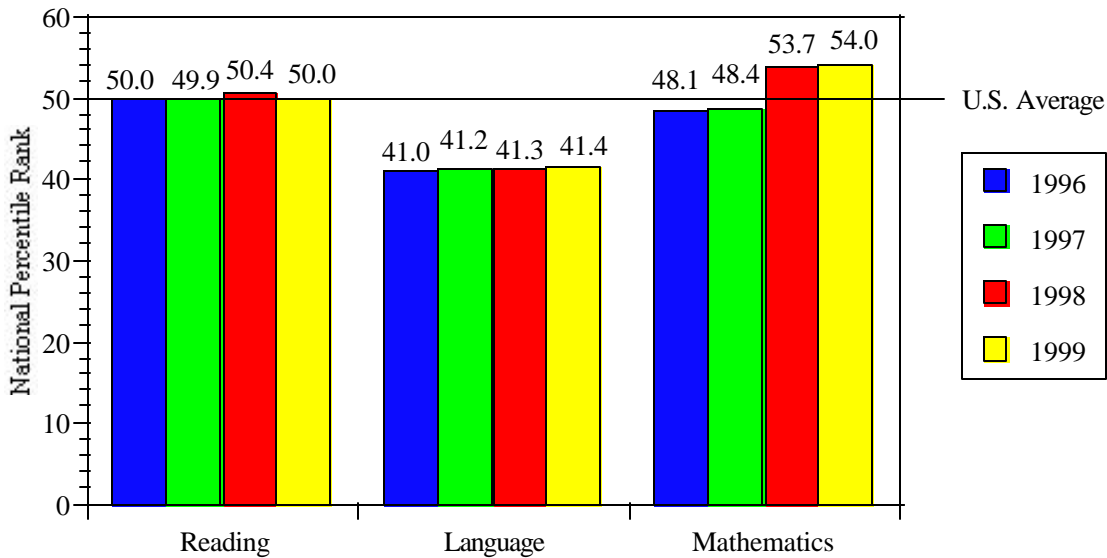
¹Without mathematics computation; referenced to 1995 national student norms.

Grade 8 (Advanced Skills)

The NPRs in Total Skills for North Carolina’s grade 8 students on the ITBS from 1996 to 1999 are shown in Figure 5. In Reading Advanced Skills and Mathematics Advanced Skills, grade 8 students scored at or above the U. S. average in 1999 and in the previous year.

Grade 8 performance in Language Advanced Skills has been consistently below the U. S. average by nearly nine points since 1996. Grade 8 students’ performance in Language Advanced Skills in 1999 continued to lag their performances in Reading and Mathematics Advanced Skills.

Figure 5. National Percentile Ranks (NPRs) in Advanced Skills for North Carolina’s Grade 8 Students on the Iowa Tests of Basic Skills (ITBS), 1996-1999¹.



¹ Referenced to 1995 national student norms.

ITBS Trends

The average reading and mathematics total and advanced skills scores for North Carolina’s grade 5 and grade 8 students have been at or near the U. S. average from 1996 to 1999 (see Table 4). However, language total and advanced skills scores for the state’s students have been well below the U. S. average over the same period. The lower ITBS scores in language probably reflect differences between North Carolina’s instructional focus and the ITBS language skills tests.

In recent years, North Carolina’s primary instructional focus has been on composing skills and the presentation of ideas, with less emphasis on standard English conventions such as grammar, spelling, usage, and sentence formation. This trend might also be associated with the lowered language convention scores for grades 4 and 7 on recent North Carolina writing assessments. Similarly, the ITBS language skills tests assess students’ ability to apply the fundamental conventions of standard written English, i.e. grammatical conventions such as spelling, capitalization, punctuation, usage and expression. The latter two comprise the advanced language skills score. Since language usage and expression are more closely related to the presentation of ideas, ITBS advanced language skills scores are slightly higher than total language skills for both grade 5 and grade 8 students (see Table 4). This result is consistent with the current focus of writing instruction in the state. However, the limited emphasis on the fundamental conventions of writing has resulted in overall lowered ITBS language scores.

It appears that in addition to emphasis on developing and composing written ideas, additional emphasis should be placed on the fundamental conventions of written expression. Plans are already underway to ensure that North Carolina's students develop such competencies. The Revised English/Language Arts Standard Course of Study, which is scheduled for implementation in 2001, contains grammar goals at each grade level. This refocusing on the fundamental conventions of written expression should result in increased scores on assessments of language skills for North Carolina's students.

Table 4. Summary of National Percentile Ranks (NPRs) in the Various Skill Areas of the Iowa Tests of Basic Skills (ITBS), North Carolina's Grades 5 and 8, 1996-1999

| Tests | National Percentile Ranks (NPRs) | | | | | | | |
|---------------------------------------|----------------------------------|------|------|------|---------|------|------|------|
| | Grade 5 | | | | Grade 8 | | | |
| | 1999 | 1998 | 1997 | 1996 | 1999 | 1998 | 1997 | 1996 |
| Reading Total Skills ¹ | 48.9 | 46.4 | 48.6 | 46.2 | 49.2 | 51.8 | 48.9 | 48.7 |
| Reading Advanced Skills | 53.6 | 48.4 | 48.2 | 48.0 | 50.0 | 50.4 | 49.9 | 50.0 |
| Language Total Skills ¹ | 36.6 | 36.5 | 36.7 | 34.8 | 38.5 | 38.4 | 40.9 | 40.5 |
| Language Advanced | 38.1 | 38.0 | 38.0 | 37.8 | 41.4 | 41.3 | 41.2 | 41.0 |
| Mathematics Total Skills ¹ | 54.0 | 48.4 | 48.2 | 43.4 | 54.9 | 49.4 | 48.9 | 43.2 |
| Mathematics Advanced | 50.3 | 50.1 | 50.1 | 49.5 | 54.0 | 53.7 | 48.4 | 48.1 |
| Survey Battery Total ¹ | 45.8 | 43.3 | 43.8 | 40.1 | 45.5 | 45.8 | 44.6 | 41.9 |

Note: All scores are referenced to 1995 norms.

¹Total skills scores are without mathematics computation.

Scholastic Assessment Test (SAT)

Background

The Scholastic Assessment Test (SAT) is recognized as a useful tool for evaluating developmental verbal and mathematical abilities in individual students and in assessing their academic preparation for college admissions. Even with some criticism it has received regarding its fairness and efficacy (Jacobs, 1995), the SAT continues to be taken widely by students in North Carolina and the nation.

One function of the SAT is to provide scores to colleges and universities for assessing the academic preparation of college-bound students. In this regard, the College Board (1988) cautions that “using these scores in aggregate form as a single measure to rank or rate teachers, educational institutions, districts, or states is invalid because it does not include all students...in being incomplete, this use is inherently unfair.” However, the Board sanctions the use of average SAT scores from a number of years to “reveal trends in academic preparation of students who take the test” (The College Board, 1988). SAT scores, the Board maintains, “can provide individual states and schools with a means of self-evaluation and self-comparison.”

Students in North Carolina have shown steady improvement on the SAT each year since 1989. Since that time, teachers, principals, and policy-makers have focused on improving the quality of instruction, especially in content areas closely related to material included on the SAT.

A new version of the SAT was administered in March 1994. The scores from the new test were equated with scores from the previous test. All scores in this report have been equated with the new test. Consequently, 1995 scores in this report differ numerically from those for that year shown in the 1995 edition of *State of the State*.

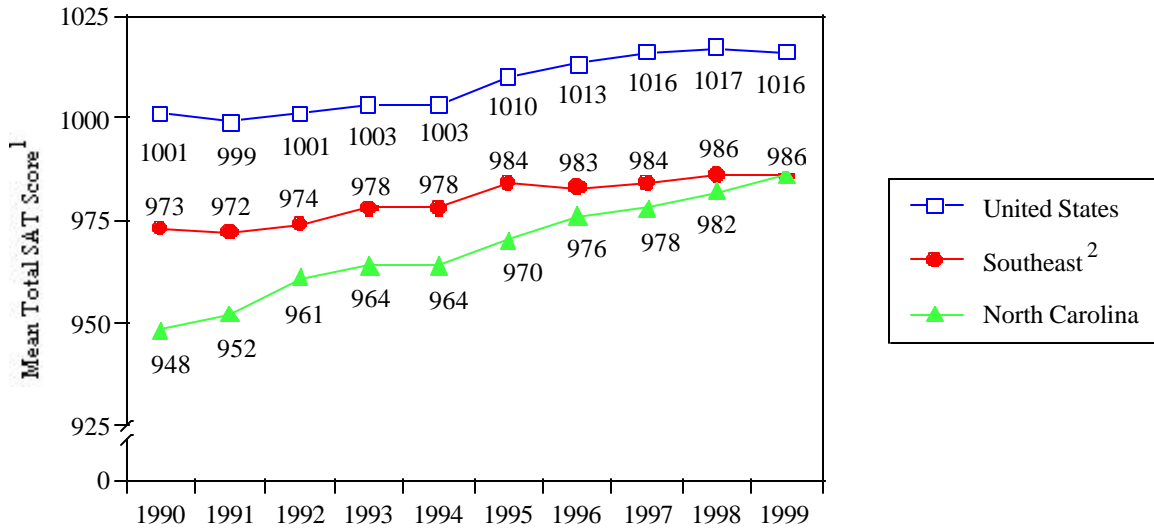
Statewide Performance

In this report, the results for North Carolina and the United States represent the performance of *public and non-public school students* scheduled to graduate in 1999. Specifically, North Carolina’s results include the performance of students in public schools, non-public schools, charter schools, the North Carolina School of the Arts, and the North Carolina School of Science and Mathematics. In 1999, 41,209 (61%) of North Carolina’s graduating seniors took the SAT I, compared with 1,220,130 (43%) in the nation (The College Board, 1999).

In 1999, the mean (average) total SAT score for North Carolina’s students (986) increased by four points, while the nation’s score (1016) decreased by one point from the previous year (see Figure 6). Although the state’s students have continued to show improvement each year, the state’s average in 1999 was still 30 points below the national average. Nevertheless, the gap between North Carolina’s average and the national

average is the smallest in 28 years. This gap has decreased by 53 points since 1972 and 28 points since 1988 (see Table 5).

Figure 6. Mean Total SAT Scores for North Carolina, the Southeast, and the United States, 1990-1999.



¹ All Scholastic Assessment Test scores are reported on the recentered score scale (1995).

² The Southeast region's average is a weighted average of results for Florida, Georgia, North Carolina, South Carolina, and Virginia.

Table 5. Mean (Average) SAT Scores for North Carolina and the Nation 1972-1999

| Year | National | | | North Carolina | | | Gap* |
|------|----------|------|-------|----------------|------|-------|------|
| | Verbal | Math | Total | Verbal | Math | Total | |
| 1999 | 505 | 511 | 1016 | 493 | 493 | 986 | 30 |
| 1998 | 505 | 512 | 1017 | 490 | 492 | 982 | 35 |
| 1997 | 505 | 511 | 1016 | 490 | 488 | 978 | 38 |
| 1996 | 505 | 508 | 1013 | 490 | 486 | 976 | 37 |
| 1995 | 504 | 506 | 1010 | 488 | 482 | 970 | 40 |
| 1994 | 499 | 504 | 1003 | 482 | 482 | 964 | 39 |
| 1993 | 500 | 503 | 1003 | 483 | 481 | 964 | 39 |
| 1992 | 500 | 501 | 1001 | 482 | 479 | 961 | 40 |
| 1991 | 499 | 500 | 999 | 478 | 474 | 952 | 47 |
| 1990 | 500 | 501 | 1001 | 478 | 470 | 948 | 53 |
| 1989 | 504 | 502 | 1006 | 474 | 469 | 943 | 63 |
| 1988 | 505 | 501 | 1006 | 478 | 470 | 948 | 58 |
| 1987 | 507 | 501 | 1008 | 477 | 468 | 945 | 63 |
| 1986 | 509 | 500 | 1009 | 477 | 465 | 942 | 67 |
| 1985 | 509 | 500 | 1009 | 476 | 464 | 940 | 69 |
| 1984 | 504 | 497 | 1001 | 473 | 461 | 934 | 67 |
| 1983 | 503 | 494 | 997 | 472 | 460 | 932 | 65 |
| 1982 | 504 | 493 | 997 | 474 | 460 | 934 | 63 |
| 1981 | 502 | 492 | 994 | 469 | 456 | 925 | 69 |
| 1980 | 502 | 492 | 994 | 471 | 458 | 929 | 65 |
| 1979 | 505 | 493 | 998 | 471 | 455 | 926 | 72 |
| 1978 | 507 | 494 | 1001 | 468 | 453 | 921 | 80 |
| 1977 | 507 | 496 | 1003 | 472 | 454 | 926 | 77 |
| 1976 | 509 | 497 | 1006 | 474 | 452 | 926 | 80 |
| 1975 | 512 | 498 | 1010 | 477 | 457 | 934 | 76 |
| 1974 | 521 | 505 | 1026 | 488 | 466 | 954 | 72 |
| 1973 | 523 | 506 | 1029 | 487 | 468 | 955 | 74 |
| 1972 | 530 | 509 | 1039 | 489 | 467 | 956 | 83 |

Notes:

1. Gap is the national mean total SAT score minus North Carolina's mean total SAT score.
2. In this table, the national and North Carolina mean scores include both public and non-public students.
3. All Scholastic Assessment Test scores are reported on the recentered score scale (1995).
4. For 1972-1986, the conversion table provided by Educational Testing Service was applied to the original North Carolina means to convert those means to the recentered scales.

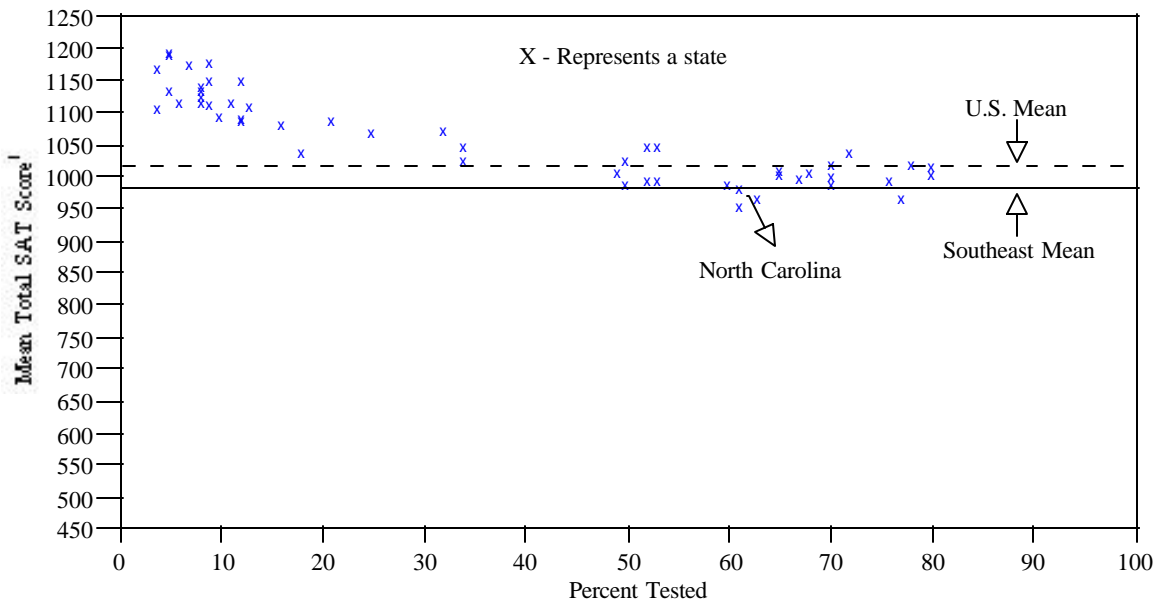
Participation Rate

Among states in the nation, the percent of seniors taking the SAT in 1999 ranged from four percent in Mississippi and South Dakota to 80 percent in New Jersey and Connecticut (DPI SAT Report, 1999, p. 29). Twenty-four states, including North Carolina, had 40 percent or more graduating seniors taking the SAT. Of these 24 states, ten had average total SAT scores of less than 1000. None of the 27 states with less than 40 percent of seniors taking the SAT had an average total SAT score of less than 1000.

Research has shown that among states, SAT participation rate is inversely related to average total SAT score, i.e. the higher the participation rate, the lower the average total score (Powell and Steelman, 1996). Evidence of this relationship can be observed in Figure 7. Those states with the lowest percent of SAT test takers attained the highest average total SAT scores, especially those states with participation rates below 40 percent.

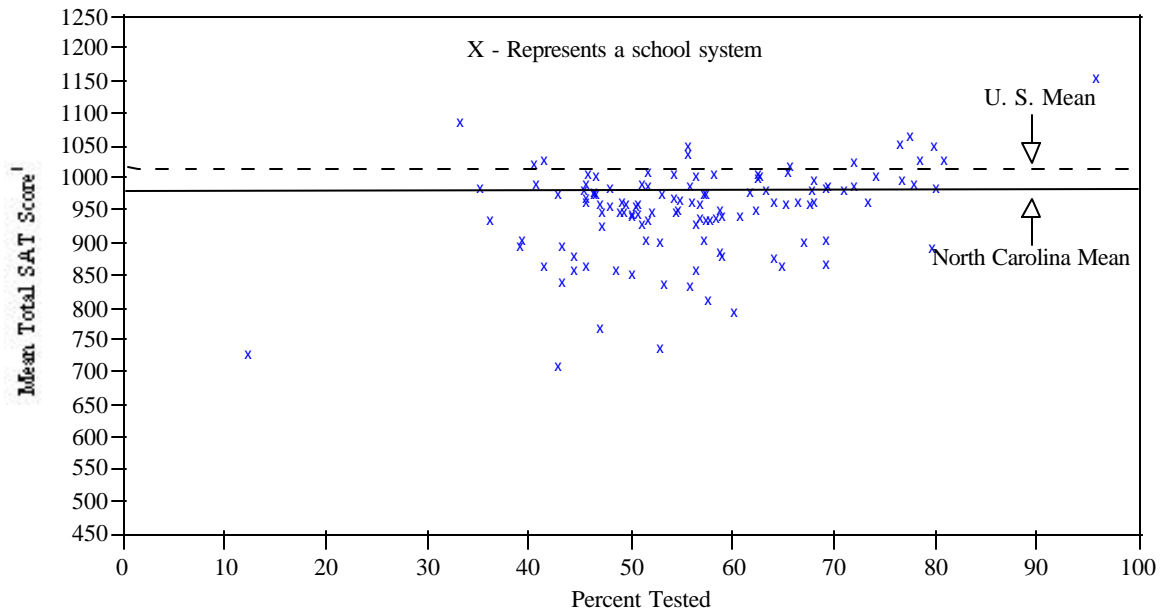
However, when the percent of SAT test takers was plotted against average total SAT scores for public school systems and public schools in North Carolina, no association between increased participation rate and decreased SAT scores was observed (see Figures 8 and 9). The absence of higher SAT scores at the lower participation rates in Figures 8 and 9 might be explained by the limited number of North Carolina's schools and school systems with participation rates below 40 percent in 1999.

Figure 7. Mean Total SAT Scores by Percent of Students Tested for all States, 1999.



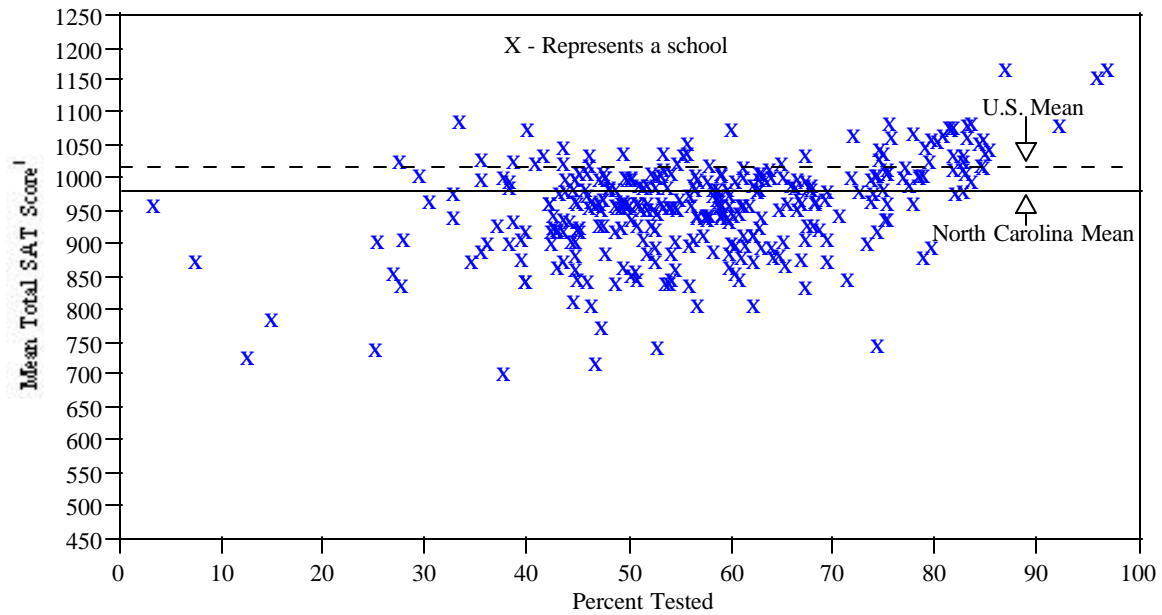
¹All Scolastic Assessment Test scores are reported on the recentered score scale (1995).

Figure 8. Mean Total SAT Score by Percent of Students Tested for all North Carolina Public School Systems, 1999.



¹ All Scholastic Assessment Test scores are reported on the recentered score scale (1995).

Figure 9. Total Mean SAT Score by Percent of Students Tested for all Public High Schools in North Carolina, 1999.



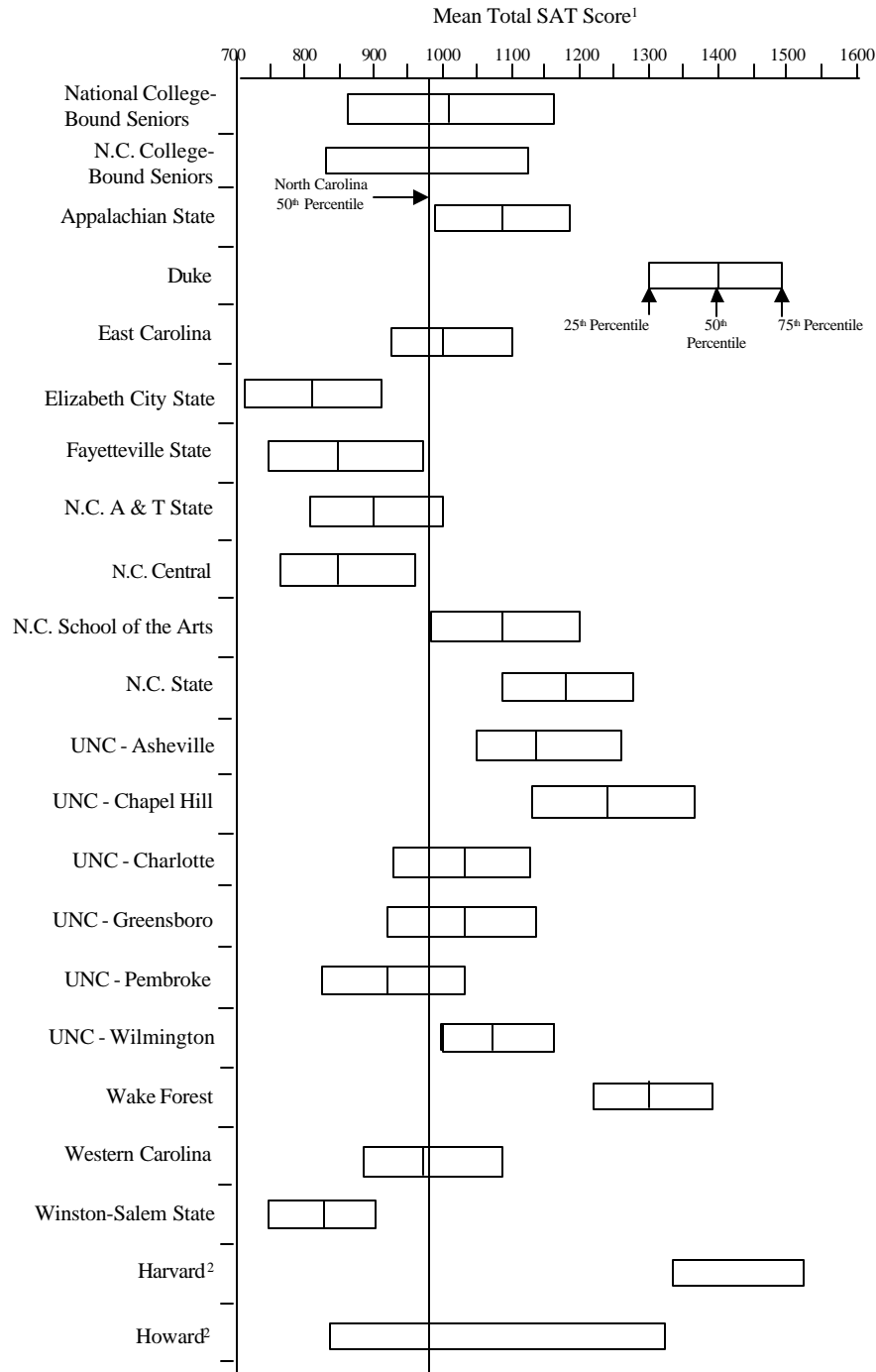
¹ All Scholastic Assessment Test scores are reported on the recentered score scale (1995).

Entering Students at UNC Institutions

The mean total SAT score of North Carolina's students graduating in 1999 was 986, while the score for freshmen entering the University of North Carolina system was 1068, four points more than the previous year. It is not surprising that students entering the University of North Carolina system have higher mean total SAT scores than students graduating from high schools in general since many students who do not perform well on the SAT choose other post-secondary options, including community college and full-time employment.

Schools within the University of North Carolina System, however, serve a wide variety of student abilities as evidenced by the mean total SAT scores of those institutions, which range from 823 to 1230 (The University of North Carolina, 1999). Figure 10 shows the range of mean total SAT scores for the middle 50 percent of North Carolina's college-bound seniors, the nation's college-bound seniors, and entering freshmen at the University of North Carolina system institutions and selected other institutions in 1999. The figure shows that each of the University of North Carolina system institutions serves some students who score like the middle 50 percent of college-bound seniors in North Carolina and the nation. Duke, Wake Forest, and Harvard are more likely to serve students who score like the top 25 percent of college-bound seniors in North Carolina and the nation. Howard University serves a diverse student body, including students who score similar to the top 25 percent of college-bound seniors in North Carolina and the nation.

Figure 10. The 25th, 50th, and 75th Percentile of SAT Total Mean Scores for National College-Bound Seniors, North Carolina's College-Bound Seniors, Entering Freshmen at Institutions of the University of North Carolina System, and Selected Private Universities, Fall 1999.



¹All Scholastic Assessment Test scores are reported on the recentered score scale (1995).
²Information on the 50th percentile for Harvard University and Howard University entering freshmen was not available; quartiles for Harvard, Howard University and Wake Forest Universities based on 1998 data.
 Source: The University of North Carolina (in press). *Averages and Quartiles of SAT Scores of Entering Freshmen in the University of North Carolina, Fall 1999*. Statistical Abstract of Higher Education in North Carolina, 1999-2000. Chapel Hill, NC.; Graham, A. E. & Morse, R. J. (August 1999). How U. S. News ranks colleges. U. S. News & World Report. 84-105.

The member institutions of the University of North Carolina system require SAT scores from freshmen applicants, with each institution establishing its own entrance standards. Thus, the weight that SAT scores carry in the admissions process varies from institution to institution. The average total SAT scores for freshmen entering the University of North Carolina system from 1996 to 1999 are shown in Table 6.

In the fall of 1999, the total average SAT scores for first year students at the various UNC system institutions ranged from 823 at Elizabeth City State to 1245 at UNC-Chapel Hill. The total average score for all UNC institutions was 1068, four points higher than the average in 1998. Average total SAT scores vary from year to year as shown in Table 6. Nine institutions showed an overall increase from 1998 to 1999, while five decreased and one stayed the same.

Historically, the UNC average total SAT score has exceeded the United States and North Carolina averages (see Table 6). In 1999, the UNC average (1068) was 82 points higher than the North Carolina average (986) and 52 points higher than the United States average (1016). The 52 point difference between the UNC average and the United States average was five points more than the difference in 1998.

Table 6. Average Total SAT Scores of Freshmen Entering Member Institutions of the University of North Carolina System, 1996-1999

| Institutions | Fall 1996 | Fall 1997 | Fall 1998 | Fall 1999 | Difference 1999-1996 | Difference 1999-1998 |
|---------------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| Appalachian | 1087 | 1076 | 1075 | 1092 | 5 | 17 |
| East Carolina | 1015 | 1014 | 1019 | 1016 | 1 | -3 |
| Elizabeth City | 840 | 825 | 823 | 823 | -17 | 0 |
| Fayetteville State | 867 | 833 | 833 | 867 | 0 | 34 |
| N.C. A and T | 933 | 928 | 922 | 911 | -22 | -11 |
| N.C. Central | 912 | 894 | 898 | 876 | -36 | -22 |
| N.C. State | 1148 | 1154 | 1159 | 1179 | 31 | 20 |
| UNC-Asheville | 1141 | 1150 | 1142 | 1151 | 10 | 9 |
| UNC-Chapel Hill | 1222 | 1220 | 1230 | 1245 | 23 | 15 |
| UNC-Charlotte | 1023 | 1015 | 1013 | 1034 | 11 | 21 |
| UNC-Greensboro | 1027 | 1028 | 1030 | 1038 | 11 | 8 |
| UNC-Pembroke | 898 | 914 | 921 | 932 | 34 | 11 |
| UNC-Wilmington | 1055 | 1080 | 1082 | 1086 | 31 | 4 |
| Western Carolina | 983 | 980 | 998 | 994 | 11 | -4 |
| Winston Salem State | 851 | 849 | 845 | 837 | -14 | -8 |
| UNC Average | 1061 | 1060 | 1064 | 1068 | 7 | 4 |
| N.C. Average | 976 | 978 | 982 | 986 | 10 | 4 |
| U.S. Average | 1013 | 1016 | 1017 | 1016 | 3 | -1 |

Note: In the fall of 1991, the method of calculating the average SAT score for the University of North Carolina and its constituent institutions was changed to accommodate score data in unit record, rather than frequency distribution, format. Score averages dating back to 1981 have been revised to reflect the new method. All these scores are re-centered.

Advanced Placement (AP) Examinations

Background

The Advanced Placement Program of the College Board is a cooperative educational endeavor that was introduced four decades ago to enable students to complete college-level studies while still in high school. The premise behind the program is that college-level material can be taught successfully to able and well-prepared secondary school students. Students may use these courses for college placement and/or credit, if they make the required grade on the AP examination. More than half the nation's high schools participate in the AP Program. In addition, more than 90 percent of the nation's colleges and universities permit incoming students to receive credit and/or placement if students make the qualifying AP scores.

The Advanced Placement Program uses a grading scale of one to five for its examinations. A grade of three or higher is the benchmark used by most institutions for awarding credit or advanced placement. The AP grading scale is as follows:

- 5 = Extremely well qualified
- 4 = Well qualified
- 3 = Qualified
- 2 = Possibly qualified
- 1 = No recommendation

Research has shown a high correlation between students' performance on Advanced Placement Examinations and their success in college; consequently, the use of the AP Examination results by both schools and students has grown steadily over the years.

Statewide Performance

In the 1998-99 school year, 17,941 public school students in North Carolina took 30,186 AP Examinations, an increase of 14.4% more students and 21.9% more examinations than in the previous year (The College Board, 1999). Nationally, 568,021 public school students took 923,039 examinations, an increase of 11.4% more students and 13.8% more examinations than in 1998. Between 1988 and 1998, the percent of North Carolina schools participating in the program increased from 42 percent to 67.6 percent, and the number of students taking one or more examinations nearly tripled.

Table 7 shows the grade distribution for AP examinations taken by public school students in North Carolina and the nation in 1997-98 and 1998-99. Of the total number of examinations taken by North Carolina students in 1998-99, 54.3 percent attained grades of three or higher, four points less than the previous year. Nationally, 61.9 percent of all students taking the examinations in 1999 made grades of three or higher, compared with 62.6 percent in 1998.

Table 7. Number and Percent of Advanced Placement (AP) Examination Grades for Students in North Carolina and the Nation, 1998-1999

| Examination Grade | North Carolina | | | | Nation | | | |
|-------------------|------------------------|--------|-------------------------|-------|------------------------|---------|-------------------------|-------|
| | Number of Examinations | | Percent of Examinations | | Number of Examinations | | Percent of Examinations | |
| | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 |
| 5 | 2,630 | 3,004 | 10.6 | 10.0 | 109,509 | 128,178 | 13.5 | 13.9 |
| 4 | 4,579 | 5,278 | 18.5 | 17.5 | 164,764 | 187,356 | 20.3 | 20.3 |
| 3 | 7,177 | 8,075 | 29.0 | 26.8 | 233,624 | 255,965 | 28.8 | 27.7 |
| 2 | 6,769 | 8,421 | 27.3 | 27.9 | 202,958 | 230,878 | 25.0 | 25.0 |
| 1 | 3,612 | 5,408 | 14.6 | 17.9 | 100,384 | 120,662 | 12.4 | 13.1 |
| Total | 24,767 | 30,186 | 100.0 | 100.1 | 811,239 | 923,039 | 100.0 | 100.0 |

¹Totals may not sum to 100 due to rounding.

In 1999, the College Board offered 32 different Advanced Placement Examinations. The ten most frequently taken by North Carolina's public school students are shown in Table 8. The percent of scores equal to three or higher for each examination is also displayed. U. S. History was taken most frequently, followed by English Literature and Composition. English Literature and Composition had the highest percent of scores equal to 3 or higher (62.4 percent); the examination with the lowest percent of scores equal to 3 or higher was Chemistry (41.6 percent).

Table 8. Most Frequently Taken Advanced Placement (AP) Examinations by North Carolina's Public School Students, 1999

| Examinations | Number of Examinations | % of Scores Equal to 3 or Higher |
|----------------------------------|------------------------|----------------------------------|
| U. S. History | 5,661 | 46.4 |
| English Literature & Composition | 4,756 | 62.4 |
| Mathematics: Calculus AB | 3,534 | 55.3 |
| English Language & Composition | 3,180 | 58.8 |
| Biology | 2,666 | 49.8 |
| History: European | 1,759 | 61.8 |
| Chemistry | 1,314 | 41.6 |
| Statistics | 1,222 | 54.0 |
| Psychology | 911 | 59.4 |
| Physics B | 700 | 45.7 |

Section 2. North Carolina's Performance and State Standards

ABCs of Public Education

Background

In recent years, North Carolina has undertaken a number of school improvement initiatives aimed at making its educational system one of the best in the nation. Primary among these groundbreaking initiatives was the *ABCs of Public Education*. The State Board of Education developed the ABCs of Public Education in response to legislation enacted by the General Assembly in June 1996.

The ABCs, which focuses on strong accountability and emphasizes high educational standards, teaching the basics, and maximum local control, was implemented statewide in elementary and middle schools (grade 3 through grade 8) for the first time in the 1996-97 school year. High schools were included for the first time in 1997-98.

Definition of Awards and Recognition Categories

Schools that attain specified levels of growth/gain are eligible for incentive awards or other recognition (including Schools of Excellence, Schools of Distinction, 25 Most Improved K-8 Schools, or 10 Most Improved High Schools). Schools where growth/gain *and* performance fall below specified levels are designated as low-performing. The ABCs awards and recognition categories are explained below.

Schools of Excellence

A School of Excellence is a school that made expected growth/gain *and* had at least 90 percent of its students performing at or above grade level (i.e., in Achievement Levels III or IV). Such schools were recognized at a statewide event sponsored by the State Board of Education and the Department of Public Instruction in fall 1999. Each recognized school received a dated banner and a certificate. In addition, each of the recognized schools received any incentive award it earned from making expected or exemplary growth/gain.

Schools of Distinction

A School of Distinction is a school that had at least 80 percent of its students performing at or above grade level (i.e., in Achievement Levels III or IV) irrespective of growth or gain (but does not qualify as a School of Excellence). Each school recognized as a School of Distinction received a plaque and a certificate.

25/10 Most Improved Schools in Academic Growth/Gain

The 25 Most Improved K-8 schools are those that attained the State's 25 highest values on the exemplary growth composite. The 10 Most Improved High Schools are those that attained the state's ten highest values on the exemplary growth/gain composite. Any school with a combination of grades that included grade 9 or higher was eligible for the high school recognition. These schools were recognized at the statewide event in the fall of 1999. In addition, each of the recognized schools received a dated banner to hang in the school, a certificate and financial awards.

Schools Making Exemplary Growth/Gain

These schools attained their exemplary growth/gain standard. Each of the schools received a certificate and financial awards. Incentive awards for making exemplary growth/gain were \$1500 per person for certified staff and \$500 per person for teacher assistants.

Schools Making Expected Growth/Gain

These schools attained their expected growth/gain standard (but not their exemplary growth/gain standard). Each of the schools received a certificate of recognition and financial awards. Incentive awards for making expected growth/gain were \$750 per person for certified staff and \$375 per person for teacher assistants.

Schools with No Recognition

These schools did not make their expected growth/gain standards; *but* they had at least half their students' scores at or above grade level (i.e., in Achievement Levels III or IV).

Low-Performing Schools

Low-Performing Schools are those that fail to meet their expected growth/gain standard and have significantly less than 50% of their students performing at or above grade level (i.e., in Achievement Levels III or IV).

ABCs Results: K-12 Schools

In 1998-99, ABCs data from all public schools were analyzed under a comprehensive ABCs model, unlike 1997-98, when the results were analyzed separately, under K-8 and high school models. Under the separate models, a school with grades spanning the elementary/middle and high school appeared in both K-8 and high school portions of the report, and statistical summaries included duplication. The 1999 results represent the third year that K-8 schools participated in the ABCs of Public Education and the second year for high schools under the ABCs accountability model.

Table 9 shows the number and percent of North Carolina’s public schools receiving awards and recognition in 1999 and the two previous years. Of the 1985 K-12 public schools participating in the 1998-99 ABCs, 1156 (58.2 percent) reached exemplary growth/gain status. Overall, 81.2 percent of the schools made expected or exemplary growth/gain. In 1997-98, 83.9 percent of the K-8 schools and 83 percent of high schools did that well. In 1998-99, 456 K-12 schools (23 percent) made expected growth/gain and 358 K-12 schools (18 percent) received no recognition. The number of low-performing schools in 1998-99 (13) decreased by more than one-half of the amount in 1997-98 (30).

The Schools of Excellence in 1998-99 (50) were slightly more than double the number in 1997-98 (24). The number of Schools of Distinction in 1998-99 (408) increased by nearly 40 percent from 1997-98 (290). Additional details about the ABCs are given in *1998-99 Report Card for the ABCs of Public Education Volume I*.

Table 9. Number and Percent of Public Schools in North Carolina Receiving Awards and Recognition, 1997-1999

| Category | 1996-97 ¹ | | 1997-98 ² | | | | 1998-99 ³ | |
|---|----------------------|------|----------------------|------|------------|------|----------------------|------|
| | K-8 | | K-8 | | HS | | K8/HS | |
| | # | % | # | % | # | % | # | % |
| Schools of Excellence | 12 | 0.7 | 24 | 1.4 | 0 | 0.0 | 50 | 2.5 |
| Schools of Distinction | 158 | 9.7 | 289 | 16.8 | 1 | 0.2 | 408 | 20.6 |
| Schools Making Exemplary Growth/Gain | 531 | 32.5 | 1137 | 66.0 | 265 | 63.2 | 1156 | 58.2 |
| Schools Making Expected Growth/Gain | 395 | 24.2 | 308 | 17.9 | 83 | 19.8 | 456 | 23.0 |
| Adequate Performance/ No Recognition ⁴ | 583 | 35.8 | 261 | 15.2 | 50 | 11.9 | 358 | 18.0 |
| Low-Performing Schools Made Expected or Exemplary Growth/Gain | 123 | 7.5 | 15 | 0.9 | 15 | 3.6 | 13 | 0.7 |
| | | 56.7 | | 83.9 | | 83.0 | | 81.2 |
| Total ABCs Schools | 1632 | | 1722 | | 419 | | 1985 | |

¹1996-97 was the first year of implementation of the ABCs; only K-8 schools were included in the model for this year.

²1997-98 was the first year of implementation of the ABCs in high schools. (Schools whose grades spanned K-12 were included in statistical summaries for both K-8 and high schools, so there is duplication in these counts.)

³1998-99 was the first year of the comprehensive application of the ABCs model; there was no duplication of schools in the statistical summary.

⁴This category was *No Recognition* in 1996-97, *Adequate Performance* in 1997-98, and *No Recognition* in 1998-99.

Caution: Comparisons across years should be made with the above footnotes in mind.

Note: 1998-99 results reflect State Board of Education actions through October 7, 1999.

Statewide Test Results

End of Grade (EOG) Tests

Background

End-of-Grade (EOG) tests were mandated by the North Carolina General Assembly. The purpose was to provide accurate measurement of individual student skills and knowledge and to provide accurate measurement of skills and knowledge of groups of students for school, school system, and state accountability. These skills and knowledge bases are specified in the North Carolina *Standard Course of Study*. A major advantage of EOG tests is that gains or losses in performance across time can be monitored. End-of-Grade tests use developmental scale scores to measure student growth in reading and mathematics.

Reading Scale Scores

Table 10 presents the average scale scores for grades 3 through 8 students and year-to-year cross-sectional growth on the statewide reading end-of-grade tests from 1996 to 1999. In 1999, the greatest growth in Reading (5.0) was observed for grade 5 students, the same as the previous year. The next largest growth was for grade 7 students (4.1), followed by grade 4 students (3.8). The least amount of growth was observed for grade 6 students (2.4).

Table 10. Mean Scale Scores for Grade 3 through Grade 8 Students in North Carolina on the Statewide Reading End-of-Grade (EOG) Tests, 1996-1999

| Grade | <u>Average Reading Score¹</u> | | | | Grade | <u>Average Reading Growth</u> | | |
|-------|--|-------|-------|-------|--------|-------------------------------|---------|---------|
| | 1996 | 1997 | 1998 | 1999 | | 1996-97 | 1997-98 | 1998-99 |
| 3 | 143.8 | 144.1 | 145.7 | 146.4 | | | | |
| 4 | 148.7 | 148.4 | 149.3 | 149.5 | 3 to 4 | 4.6 | 5.2 | 3.8 |
| 5 | 152.1 | 153.0 | 154.3 | 154.3 | 4 to 5 | 4.3 | 5.9 | 5.0 |
| 6 | 155.3 | 155.6 | 155.8 | 156.7 | 5 to 6 | 3.5 | 2.8 | 2.4 |
| 7 | 157.9 | 158.2 | 159.0 | 159.9 | 6 to 7 | 2.9 | 3.4 | 4.1 |
| 8 | 160.0 | 160.9 | 161.9 | 162.3 | 7 to 8 | 3.0 | 3.7 | 3.3 |

¹Data are not based on matched student scores, but are cross-sectional.

Mathematics Scale Scores

The greatest growth in mathematics in 1999 was for grade 4 students (9.9), followed by grade 5 (7.7), grade 6 (7.4) and grade 7 students (7.2) as shown in Table 11. The least growth was observed for grade 8 students (4.9). Average growth in mathematics (7.4) was greater than average growth in reading (3.7) from 1997 to 1999, with growth decreasing progressively at the higher grade levels.

Table 11. Mean Scale Scores for Grade 3 through Grade 8 Students in North Carolina on the Statewide Mathematics End-of-Grade (EOG) Tests, 1996-1999

| Average Mathematics Score ¹ | | | | | Average Mathematics Growth | | | |
|--|-------|-------|-------|-------|----------------------------|---------|---------|---------|
| Grade | 1996 | 1997 | 1998 | 1999 | Grade | 1996-97 | 1997-98 | 1998-99 |
| 3 | 141.9 | 142.8 | 142.3 | 142.9 | | | | |
| 4 | 148.5 | 149.5 | 151.5 | 152.2 | 3 to 4 | 7.6 | 8.7 | 9.9 |
| 5 | 155.2 | 156.4 | 157.4 | 159.2 | 4 to 5 | 7.9 | 7.9 | 7.7 |
| 6 | 161.4 | 162.0 | 163.6 | 164.8 | 5 to 6 | 6.8 | 7.2 | 7.4 |
| 7 | 166.4 | 167.5 | 169.2 | 170.8 | 6 to 7 | 6.1 | 7.2 | 7.2 |
| 8 | 170.6 | 171.1 | 173.7 | 174.1 | 7 to 8 | 4.7 | 6.2 | 4.9 |

¹Data are not based on matched student scores, but are cross-sectional.

Definition of Achievement Levels

Achievement levels are used to describe End-of-Grade performance because they allow the comparison of student and group performance to preset standards. These standards are based on what is expected in each subject at each grade level. Achievement levels were determined by relating judgments of thousands of North Carolina teachers regarding the performance of each of their students to each student's performance on the end-of-grade multiple-choice tests. The four achievement levels used by the statewide testing program are listed in Table 12.

Table 12. Description of Four Achievement Levels used in North Carolina's End-of-Grade (EOG) Testing

| | |
|-----------|---|
| Level I | Students performing at this Level do not have sufficient mastery of knowledge and skills in the subject area to be successful in the next grade. |
| Level II | Students performing at this level demonstrate inconsistent mastery of knowledge and skills in the subject area and are minimally prepared to be successful at the next grade level. |
| Level III | Students performing at this level consistently demonstrate mastery of the grade level subject matter and skills and are well prepared for the next grade level. |
| Level IV | Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work. |

Reading Achievement Levels

Table 13 shows the percent of students moving from one reading achievement level to the next in subsequent years. Column one shows the reading achievement levels, column two the number of students in the reading achievement levels in 1998, and columns 3-6 the percent of students remaining at the 1998 levels, or moving to higher or lower levels in 1999. For example, of the 37,587 students in Reading Achievement Level I in 1998, 36.4 percent remained at that level in 1999, and 63.6 percent progressed to higher levels in 1999 (49.7 percent scoring in Level II, 12.8 percent scoring in Level III and 1.1 percent in Level IV).

Overall, Table 13 shows that students who started out in higher achievement levels tended to continue their high performance in the next year. For example, of the students in Reading Levels III and IV in 1998, 64.4 percent and 78.1 percent, remained at those levels in 1999, respectively. Among students who started out in Levels I and II, some students improved the subsequent year, but far too many continued to perform in the lowest achievement levels. For example, of the students scoring in Levels I and II in 1998, 36.4 percent and 49.0 percent, respectively, remained at the same level in 1999.

Table 13. Transition between End-of-Grade (EOG) Reading Achievement Levels for Grade 3 through Grade 8 Matched Cohorts in North Carolina, 1998-1999

| | N at Level 1998 | % Level I 1999 | % Level II 1999 | % Level III 1999 | % Level IV 1999 |
|-----------|--------------------|-------------------|--------------------|---------------------|--------------------|
| Level I | 37,587 | 36.4 | 49.7 | 12.8 | 1.1 |
| Level II | 110,873 | 10.9 | 49.0 | 37.5 | 2.6 |
| Level III | 214,622 | 1.1 | 13.1 | 64.4 | 21.4 |
| Level IV | 169,681 | 0.0 | 0.7 | 21.3 | 78.1 |

Mathematics Achievement Levels

Table 14 shows the percent of students progressing from one mathematics achievement level to the next in subsequent years. Column one shows the mathematics achievement levels, column two the number of students in the mathematics achievement levels in 1998, and columns 3-6 the percent of students remaining at the 1998 levels, or moving to higher or lower levels, in 1999. For example, of the 23,872 students in Mathematics Achievement Level I in 1998, 33.9 percent remained at that level in 1999 and 66.1 percent progressed to higher levels in 1999 (50.0 percent scoring in Level II, 15.3 percent in Level III and 0.8 percent in Level IV).

The performance pattern in mathematics achievement was very similar to that for reading, with students who started out in higher achievement levels continuing high performance and many of those who started at the lower achievement levels continuing low performance. For example, of the total students in Mathematics Achievement Levels III and IV in 1998, 61.6 percent and 84.1 percent, respectively, remained at those levels

in 1999. However, of the students who started at Mathematics Achievement Levels I and II, 33.9 percent and 43.8 percent, respectively, scored at the same level in 1999.

Table 14. Transition between End-of-Grade (EOG) Mathematics Achievement Levels for Grade 3 through Grade 8 Matched Cohorts in North Carolina, 1998-1999

| | N at Level 1998 | % Level I 1999 | % Level II 1999 | % Level III 1999 | % Level IV 1999 |
|-----------|--------------------|-------------------|--------------------|---------------------|--------------------|
| Level I | 23,872 | 33.9 | 50.0 | 15.3 | 0.8 |
| Level II | 98,054 | 11.4 | 43.8 | 42.1 | 2.8 |
| Level III | 217,768 | 1.3 | 13.4 | 61.6 | 23.8 |
| Level IV | 194,967 | 0.0 | 0.6 | 15.3 | 84.1 |

Achievement Level Trends

From 1996-97 to 1998-99 increasing percentages of students moved to higher achievement levels in reading and mathematics while the percentages remaining at or falling to lower levels decreased (see Table 15). For example, in 1998-99, 7.2 percent, 6.4 percent, and 1.6 percent more students progressed from Levels I, II, and III in reading, respectively, to higher levels than in 1996-97. A similar trend was observed in mathematics with 6.5 percent, 8.5 percent, and 3.0 percent more students, respectively, progressing to higher levels than in 1996-97. These percentages might be associated with increased instructional focus in these subjects during this time period. While progress has been made, still too many of the state's students are not moving to higher levels, particularly those students at the lower achievement levels.

Table 15. Percent of Students in Grades 3-8 Remaining at Level and Transitioning to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|-------------------------------------|---------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| Percent Remaining at Level | | | | | | |
| Level I | 44.0 | 40.3 | 39.2 | 34.7 | 36.4 | 33.9 |
| Level II | 52.2 | 48.9 | 47.6 | 45.4 | 49.0 | 43.8 |
| Level III | 64.8 | 62.7 | 63.2 | 62.2 | 64.4 | 61.6 |
| Level IV | 78.6 | 82.3 | 81.6 | 83.4 | 78.1 | 84.1 |
| Percent Progressing to Higher Level | | | | | | |
| Level I | 56.4 | 59.6 | 60.3 | 65.3 | 63.6 | 66.1 |
| Level II | 33.7 | 36.4 | 41.1 | 42.9 | 40.1 | 44.9 |
| Level III | 19.8 | 20.7 | 24.1 | 23.1 | 21.4 | 23.7 |

End of Course (EOC) Tests

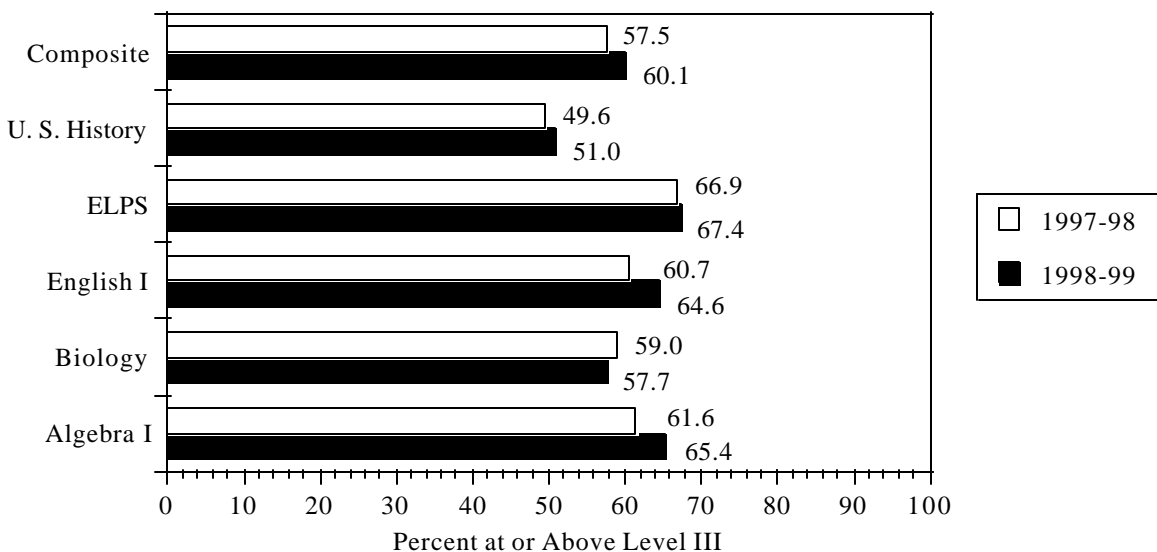
Background

North Carolina's End-of-Course (EOC) tests began in 1985-86 with the first administration of Algebra I. Since that time, ten other high school tests (Algebra II, Biology, Chemistry, ELPS, English I, English II, Geometry, Physical Science, Physics and U. S. History) have been added to the EOC Testing Program. Since five of these tests (Algebra II, Chemistry, Geometry, Physical Science, and Physics) were briefly discontinued until 1998-99, no recent historical data were available for them. Thus, the results of only six of the eleven courses (Algebra I, Biology, English I, English II, ELPS, and U.S. History) are included in this report. The English II results are presented in a separate section.

Statewide Performance

In all EOC subjects except Biology, more students were at or above Level III in 1998-99 than in the previous year (see Figure 11). In all subjects, 50 percent or more students were at or above Achievement Level III. The largest gains were in English I and Algebra I, where 3.9 percent and 3.8 percent more students, respectively, were at or above Achievement Level III in 1998-99 than in the previous year.

Figure 11. Percent of All Students at or Above Level III on End-of-Course (EOC) Tests (Algebra I, Biology, ELPS, English I, and U. S. History) and Composite, 1997-98 to 1998-99.



Writing Assessment

Background

The annual writing assessment is a state-mandated assessment of student writing performance in grade 4, grade 7, and grade 10. The writing assessment was added to the North Carolina Testing Program in 1983-84 and was included in the ABCs to ensure emphasis is placed on this vital skill in each student's academic experience.

In addition, the revised *Standard Course of Study (SCS)* emphasizes writing as a basic skill that can be improved with appropriate emphasis and instruction. Three modes of writing are included in the writing assessment: narrative, expository, and descriptive. Grade 4 students are required to write a narrative composition (personal or imaginative), while grade 7 students are asked to write either an expository (clarification or point-of-view) or descriptive composition. The compositions in grades 4 and 7 are assigned scores of 1, 2, 3, 4, or Non-Scorable (NS). A composition is assigned NS when a student's response is not readable or otherwise un-scorable.

The standard for acceptable writing at grades 4 and 7 is the mid-point score of 2.5 or above on a four-point scale. This standard is regarded as a representative and achievable level for grades 4 and 7 students.

Grade 4

Table 16 shows the percent of grade 4 students meeting or exceeding the 2.5 standard on the annual writing assessment from 1995-96 to 1998-99. Of all grade 4 students tested statewide in 1998-99, 55.2 percent met or exceeded the 2.5 standard, increasing by 3.5 percent from 1997-98, and 6.6 percent from 1996-97.

Table 16. Percent of Grade 4 Students in North Carolina at or above 2.5 on the Annual Writing Assessment, 1996-1999

| | 1995-96 | 1996-97 | 1997-98 | 1998-99 |
|---------------|---------|---------|---------|---------|
| Number Tested | 88,415 | 90,638 | 94,386 | 96,649 |
| % \geq 2.5 | 51.5 | 48.6 | 51.7 | 55.2 |

Grade 7

The percent of grade 7 students meeting or exceeding the 2.5 standard on the annual writing assessing from 1995-96 to 1998-99 is shown in Table 17. Of all the grade 7 students tested statewide in 1998-99, 70.3 percent met or exceeded the 2.5 standard, 7.8 percent more than in 1997-98 and 15.4 percent more than in 1996-97.

Table 17. Percent of Grade 7 Students in North Carolina at or above 2.5 on the Annual Writing Assessment, 1996-1999

| | 1995-96 | 1996-97 | 1997-98 | 1998-99 |
|---------------|---------|---------|---------|---------|
| Number Tested | 87,072 | 88,422 | 91,332 | 90,921 |
| % \geq 2.5 | 59.4 | 54.9 | 62.5 | 70.3 |

English II Writing Assessment

Background

The English II Assessment of Writing is a state-mandated end-of-course test that assesses writing performance in grade 10. The test is a component of the North Carolina Statewide Testing Program and assesses mastery of the writing curriculum, the application of grammatical skills, and achievement in literary analysis.

Student essays are scored on a six-point scale for content and a three-point, four-domain scale for conventions. The proficiency standard for English II is 3.0 on the six-point scale.

Grade 10

In 1998-99, approximately 56.8 percent of all students taking the English II test met or exceeded the 3.0 standard, an increase of 10.8 percentage points from the previous year (see Table 18). This result represents the largest year-to-year increase since the initial assessment in 1992-93.

Table 18. Percent of Grade 10 Students in North Carolina Scoring at or above 3.0 on the Annual English II Assessment, 1996-1999

| | Percent At or Above 3.0 Grade 10 | | | |
|--------------|-------------------------------------|---------|---------|---------|
| | 1995-96 | 1996-97 | 1997-98 | 1998-99 |
| Number | 79,951 | 79,662 | 81,260 | 81,563 |
| % \geq 3.0 | 48.5 | 49.7 | 46.0 | 56.8 |

Section 3. Closing the Gap in Student Performance

Background

The discrepancy between the academic performance of minority students and White students has been a long-standing educational concern in North Carolina and in the nation. As the composition of North Carolina's public school population has become more diverse over the past decade, concern regarding minority student achievement has increased proportionately. With a projected 40% racial minority group representation in the state's public schools by 2010, the promotion of academic achievement among minority students is likely to receive increased attention from the state's educators.

This section of the 1999 *State of the State* presents the most recent performance of minority and gender groups in the state. Such information permits the readership to monitor the educational achievement and progress of subgroups in the state's public schools. One of the primary goals of the state's public school system is to provide a quality education for all students and to graduate all students from high school with the skills and knowledge appropriate for succeeding in work and/or higher education. The subgroup achievement data provided in this section may assist policymakers, parents, and the public in monitoring the extent to which this goal is being met.

The performances of all minority groups (Hispanics, Native Americans, Asians, and Blacks) will be highlighted in this section, but primary focus will be placed on the Black-White performance gap. The Black-White performance gap is emphasized because (1) more is known about test performance among Blacks and Whites than among other groups and (2) Blacks (30.2%) comprise a larger percentage of North Carolina's public school population than Hispanics (3.1%), Native Americans (1.5%) and Asians (1.7%).

National Assessment of Educational Progress (NAEP)

Race/Ethnicity

Grade 8

The 1998 writing report was the first-ever NAEP release of state-level writing scores for North Carolina. The average writing scale score for North Carolina's grade 8 White students (159) was higher than that of their counterparts and other racial/ethnic groups in North Carolina, the Southeast and the Nation (see Table 19). North Carolina's American Indian students scored (140) six points higher than Black students (134), four points higher than Hispanic students (136), but 19 points lower than White students in writing. However, American Indian and Hispanic students represented only four and five percent (U. S. Department of Education, 1998), respectively, of the total population tested.

Table 19. Average National Assessment of Educational Progress (NAEP) Writing Scale Scores for Grade 8 Public School Students in North Carolina, the Southeast and the Nation by Race/Ethnicity, 1998

| Region | American | | | |
|----------------|-----------|-----------|-----------|-----------|
| | Indian | Black | Hispanic | White |
| North Carolina | 140 (8.1) | 134 (1.7) | 136 (4.9) | 159 (1.9) |
| Southeast | *** | 129 (1.6) | 129 (3.0) | 150 (1.4) |
| Nation | 131 (3.3) | 130 (1.0) | 129 (1.5) | 156 (0.7) |

The NAEP writing scale ranges from 0 to 300. The standard error of the statistics appear in parentheses.

*** Sample size was insufficient to permit a reliable estimate.

For writing achievement levels, more White students performed at or above the proficient level than did other racial/ethnic groups in North Carolina, with the percentage of Whites exceeding the percentage of Blacks by 24 percent (see Table 21). The same trend was observed in the Southeast and the Nation. The percentage of Hispanic students scoring at or above the proficient level was nearly double that of Black students in North Carolina, although the standard error of the Hispanic percentage was notably larger (which means the percentage may be less trustworthy).

Gender

Grade 8

North Carolina's grade 8 female students scored 21 points higher than grade 8 males in North Carolina and the Southeast and 20 points higher than grade 8 males in the nation (see Table 20). The North Carolina score for females (161) was seven points higher than that for females in the Southeast (154) and three points higher than that for females in the nation (158).

Table 20. Average National Assessment of Educational Progress (NAEP) Writing Scale Scores for Grade 8 Public School Students in North Carolina, the Southeast and the Nation by Gender, 1998

| Region | Female | Male | Difference ¹ |
|----------------|--------|------|-------------------------|
| North Carolina | 161 | 140 | 21 |
| Southeast | 154 | 133 | 21 |
| Nation | 158 | 138 | 20 |

¹Female score minus male score

Table 21. Percentages of Grade 8 Public School Students Attaining the National Assessment of Educational Progress (NAEP) Writing Achievement Levels in North Carolina, the Southeast, and the Nation by Race/Ethnicity, 1998

| | Below Basic | At or Above Basic | At or Above Proficient | Advanced |
|------------------------|--------------------|--------------------------|-------------------------------|-----------------|
| White | | | | |
| North Carolina | 10 (1.3) | 90 (1.3) | 35 (2.2) | 2 (0.6) |
| Southeast | 14 (0.7) | 86 (0.7) | 24 (2.5) | 1 (0.2) |
| Nation | 11 (0.6) | 89 (0.6) | 31 (1.0) | 1 (0.2) |
| Black | | | | |
| North Carolina | 24 (2.3) | 76 (2.3) | 11 (1.6) | 0 (**) |
| Southeast | 30 (2.6) | 70 (2.6) | 6 (1.0) | 0 (**) |
| Nation | 29 (1.5) | 71 (1.5) | 7 (0.7) | 0 (**) |
| Hispanic | | | | |
| North Carolina | 30 (4.6) | 70 (4.6) | 21 (5.6) | 1 (**) |
| Southeast | 32 (3.3) | 68 (3.3) | 11 (2.4) | 0 (**) |
| Nation | 32 (1.4) | 68 (1.4) | 10 (1.0) | 0 (0.1) |
| American Indian | | | | |
| North Carolina | 23 (9.2) | 77 (9.2) | 17 (5.8) | 0 (**) |
| Southeast | ** (**) | ** (**) | ** (**) | * (**) |
| Nation | 29 (4.9) | 71 (4.9) | 8 (2.7) | 0 (**) |

The achievement levels correspond to the following points on the NAEP writing scale at grade 8: Basic, 114-172; Proficient, 173-223; and Advanced, 224 and above. The standard errors of the statistics appear in parentheses. **Sample size is insufficient to permit a reliable estimate. (**)Standard error estimates cannot be accurately determined.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 Writing Assessment.

Iowa Tests of Basic Skills (ITBS)

Race/Ethnicity

Grade 5

In 1999, grade 5 White students scored above the national average and ranked higher than other racial/ethnic groups in Reading Total Skills (57.3) and Reading Advanced Skills (58.9) as shown in Table 22. They also scored highest in Language Advanced Skills (44.3), but were 5.7 points below the national average. Asian students scored above the national average and outscored other racial/ethnic groups in Mathematics Total Skills (68.0), Mathematics Advanced Skills (66.2), and the Total Survey Battery (61.0). Their score in Language Total Skills (46.0) was also higher than that of other racial/ethnic groups but was four points below the national average. American Indian, Hispanic and Black students in grade 5 ranked well below the national average (50) on all sub-tests in 1999. The highest score among these groups was attained by American Indians in Mathematics Total Skills (45.5 NPR).

The Black-White performance gap on the ITBS for the state's grade 5 students did not narrow consistently and systematically in any content area from 1996 to 1999 (see Table 23). However, the Black-White gap was narrower in 1999 across all content areas than in 1996.

The Hispanic-White performance gap on the ITBS at grade 5 was smaller in 1999 than 1996 for Reading Total Skills, Reading Advanced Skills, Language Total Skills, and Language Advanced Skills, but the reverse trend was observed for Mathematics Total Skills, Mathematics Advanced Skills and the Survey Battery.

The American Indian-White performance gap at grade 5 was appreciably smaller across all content areas in 1999 than in 1996. Historically, the White-Asian student performance gap has been substantially smaller than for other racial-ethnic groups. This trend continued in 1999, with Asian students scoring higher than White students in four of the content areas.

Race Ethnicity

Grade 8

Among grade 8 students in 1999, White students ranked higher than other racial/ethnic groups in Reading Total Skills (59.3), Reading Advanced Skills (49.5), Language Total Skills (49.5), Language Advanced Skills (53.7) and the Total Survey Battery (55.1) as shown in Table 24. All scores were near or at the national average. Asian students ranked well above the national average and scored higher than other racial/ethnic groups in Mathematics Total Skills (64.0) and Mathematics Advanced Skills (71.6) in 1999.

American Indian, Black, and Hispanic students ranked below the national average (50) on all components of the ITBS in 1998, 1997, and 1996. This pattern continued in 1999 with the exception that American Indians attained a 54.6 NPR in Mathematics Total Skills. In 1999, American Indian and Hispanic students improved or equaled their previous year's performance on all ITBS sub-tests except Reading Advanced Skills.

Hispanics made greater progress in closing the performance gap between White students than other racial/ethnic groups at grade 8 (see Table 25). Hispanics closed the gap systematically in all content areas except language total and language advanced skills from 1996 to 1999. For Hispanics, the gap was narrower in all content areas in 1999 than in 1996.

In most cases, the ITBS performance gap between grade 8 White and Black students did not narrow discernibly from 1996 to 1999. However, the White-Black gap was narrower in Reading Total Skills, Advanced Skills, and the Survey Battery in 1999 than in 1996.

The gap between White and American Indian student performance on the ITBS was appreciably narrower in Reading Advanced Skills, Mathematics Total Skills, and Mathematics Advanced Skills in 1999 than in 1996. The gap on the Survey Battery was also narrower, although of smaller magnitude than the previously mentioned content areas.

The smallest White student-minority student gap at grade 8 has been for Asian students each of the past four years. Grade 8 Asian students are the only racial/ethnic group to out-perform White students in 1999, scoring higher in Mathematics Total Skills and Mathematics Advanced Skills.

Table 22. National Percentile Ranks (NPRs) for Grade 5 Students in North Carolina on the Iowa Tests of Basic Skills (ITBS) by Race/Ethnicity, 1996-1999

| | Year | American Indian | Asian | Black | Hispanic | White |
|-----------------|------|--------------------|-------|-------|----------|-------|
| Reading | | | | | | |
| Total Skills | 1999 | 28.5 | 53.2 | 27.1 | 29.8 | 57.3 |
| | 1998 | 26.8 | 68.3 | 27.3 | 27.2 | 60.5 |
| | 1997 | 28.5 | 38.3 | 29.5 | 27.0 | 57.5 |
| | 1996 | 21.5 | 46.0 | 26.8 | 27.2 | 57.1 |
| Advanced Skills | 1999 | 39.0 | 56.5 | 31.3 | 36.0 | 58.9 |
| | 1998 | 31.0 | 66.4 | 31.4 | 30.8 | 59.1 |
| | 1997 | 26.4 | 36.3 | 31.2 | 35.8 | 59.0 |
| | 1996 | 23.0 | 53.9 | 30.7 | 31.4 | 58.7 |
| Language | | | | | | |
| Total Skills | 1999 | 25.0 | 46.0 | 23.7 | 30.0 | 40.5 |
| | 1998 | 12.4 | 54.8 | 22.4 | 25.7 | 42.9 |
| | 1997 | 25.0 | 52.3 | 25.7 | 26.0 | 42.7 |
| | 1996 | 14.8 | 49.0 | 20.2 | 25.8 | 42.5 |
| Advanced Skills | 1999 | 24.3 | 38.2 | 23.9 | 30.7 | 44.3 |
| | 1998 | 17.8 | 44.3 | 23.6 | 31.1 | 44.2 |
| | 1997 | 27.5 | 43.6 | 24.2 | 31.0 | 44.1 |
| | 1996 | 21.0 | 38.2 | 18.5 | 23.7 | 44.1 |
| Mathematics | | | | | | |
| Total Skills | 1999 | 45.5 | 68.0 | 33.4 | 37.4 | 62.0 |
| | 1998 | 30.3 | 82.0 | 33.1 | 37.2 | 59.0 |
| | 1997 | 42.6 | 59.0 | 32.5 | 33.0 | 58.9 |
| | 1996 | 27.5 | 51.0 | 25.0 | 37.1 | 54.0 |
| Advanced Skills | 1999 | 43.2 | 66.2 | 36.2 | 36.4 | 58.5 |
| | 1998 | 35.6 | 80.7 | 36.0 | 43.0 | 58.2 |
| | 1997 | 42.6 | 58.3 | 36.0 | 35.9 | 58.2 |
| | 1996 | 36.0 | 50.1 | 28.8 | 43.0 | 57.6 |
| Total | | | | | | |
| Survey Battery | 1999 | 29.0 | 61.0 | 27.7 | 31.3 | 53.4 |
| | 1998 | 20.0 | 64.0 | 25.8 | 29.0 | 52.7 |
| | 1997 | 28.0 | 45.0 | 27.9 | 31.0 | 52.4 |
| | 1996 | 19.0 | 51.0 | 22.2 | 29.8 | 50.4 |

Note: National Percentile Ranks are referenced to 1995 national student Norms.

Table 23. Differences in Percentile Rank (NPR) between Grade 5 White Students and other Grade 5 Racial/Ethnic Groups on the Iowa Tests of Basic Skills (ITBS), 1996-1999.

| | | American | | | |
|-----------------|------|----------|-------|-------|----------|
| | Year | Indian | Asian | Black | Hispanic |
| Reading | | | | | |
| Total Skills | 1999 | 28.8 | 4.1 | 30.2 | 27.5 |
| | 1998 | 33.7 | -7.8 | 33.2 | 33.3 |
| | 1997 | 29.0 | 19.2 | 28.0 | 30.5 |
| | 1996 | 35.6 | 11.1 | 30.3 | 29.9 |
| Advanced Skills | 1999 | 19.9 | 2.4 | 27.6 | 22.9 |
| | 1998 | 28.1 | -7.3 | 27.7 | 28.3 |
| | 1997 | 32.6 | 22.7 | 27.8 | 23.2 |
| | 1996 | 35.7 | 4.8 | 28.0 | 27.3 |
| Language | | | | | |
| Total Skills | 1999 | 15.5 | -5.5 | 16.8 | 10.5 |
| | 1998 | 30.5 | -11.9 | 20.5 | 17.2 |
| | 1997 | 17.7 | -9.6 | 17.0 | 16.7 |
| | 1996 | 27.7 | -6.5 | 22.3 | 16.7 |
| Advanced Skills | 1999 | 20.0 | 6.1 | 20.4 | 13.6 |
| | 1998 | 26.4 | -0.1 | 20.6 | 13.1 |
| | 1997 | 16.6 | 0.5 | 19.9 | 13.1 |
| | 1996 | 23.1 | 5.9 | 25.6 | 20.4 |
| Mathematics | | | | | |
| Total Skills | 1999 | 16.5 | - 6.0 | 28.6 | 24.6 |
| | 1998 | 28.7 | -23.0 | 25.9 | 21.8 |
| | 1997 | 16.3 | -0.1 | 26.4 | 25.9 |
| | 1996 | 26.5 | 3.0 | 29.0 | 16.9 |
| Advanced Skills | 1999 | 15.3 | -7.7 | 22.3 | 22.1 |
| | 1998 | 22.6 | -22.5 | 22.2 | 15.2 |
| | 1997 | 15.6 | -0.1 | 22.2 | 22.3 |
| | 1996 | 21.6 | 7.5 | 28.8 | 14.6 |
| Total | | | | | |
| Survey Battery | 1999 | 24.4 | -7.6 | 25.7 | 22.1 |
| | 1998 | 32.7 | -11.3 | 26.9 | 23.7 |
| | 1997 | 24.4 | 7.4 | 24.5 | 21.4 |
| | 1996 | 31.4 | -0.6 | 28.2 | 20.6 |

¹National Percentile Rank (NPR) for White Students minus NPRs for other racial/ethnic groups.

Table 24. National Percentile Ranks (NPRs) for Grade 8 Students in North Carolina on the Iowa Tests of Basic Skills (ITBS) by Race/Ethnicity, 1996-1999

| | Year | American Indian | Asian | Black | Hispanic | White |
|-----------------|------|--------------------|-------|-------|----------|-------|
| Reading | | | | | | |
| Total Skills | 1999 | 35.6 | 55.0 | 28.0 | 39.0 | 59.3 |
| | 1998 | 28.0 | 57.0 | 28.4 | 39.0 | 61.5 |
| | 1997 | 26.5 | 36.0 | 24.6 | 35.8 | 61.8 |
| | 1996 | 35.7 | 52.0 | 24.7 | 26.5 | 59.2 |
| Advanced Skills | 1999 | 39.9 | 65.8 | 33.6 | 39.9 | 60.9 |
| | 1998 | 39.8 | 58.0 | 34.0 | 39.8 | 61.0 |
| | 1997 | 39.6 | 40.3 | 28.0 | 37.0 | 61.1 |
| | 1996 | 39.8 | 50.3 | 28.3 | 31.0 | 60.9 |
| Language | | | | | | |
| Total Skills | 1999 | 28.3 | 43.0 | 25.7 | 29.5 | 49.5 |
| | 1998 | 19.7 | 52.0 | 27.8 | 20.0 | 45.9 |
| | 1997 | 22.7 | 40.8 | 25.8 | 29.5 | 51.5 |
| | 1996 | 31.0 | 43.0 | 26.3 | 13.0 | 46.3 |
| Advanced Skills | 1999 | 30.3 | 46.8 | 29.5 | 30.3 | 53.7 |
| | 1998 | 25.0 | 44.0 | 29.8 | 19.3 | 47.4 |
| | 1997 | 25.4 | 34.8 | 25.4 | 29.9 | 53.8 |
| | 1996 | 34.9 | 30.1 | 25.5 | 18.9 | 47.4 |
| Mathematics | | | | | | |
| Total Skills | 1999 | 54.6 | 64.0 | 29.4 | 43.4 | 63.7 |
| | 1998 | 32.6 | 74.0 | 29.0 | 38.4 | 59.2 |
| | 1997 | 29.2 | 57.0 | 24.4 | 26.5 | 59.4 |
| | 1996 | 29.2 | 58.8 | 23.8 | 24.3 | 55.4 |
| Advanced Skills | 1999 | 48.4 | 71.6 | 32.8 | 48.2 | 61.2 |
| | 1998 | 27.4 | 72.0 | 32.7 | 41.4 | 60.9 |
| | 1997 | 32.9 | 57.5 | 27.3 | 26.8 | 61.0 |
| | 1996 | 32.2 | 67.0 | 27.0 | 30.0 | 54.5 |
| Total | | | | | | |
| Survey Battery | 1999 | 35.8 | 55.0 | 25.7 | 34.0 | 55.1 |
| | 1998 | 27.8 | 60.5 | 27.1 | 32.0 | 53.5 |
| | 1997 | 27.0 | 45.5 | 22.8 | 29.0 | 56.7 |
| | 1996 | 32.0 | 53.0 | 22.9 | 18.5 | 52.4 |

¹Female percentage minus male percentage.

Note: National Percentile Ranks are referenced to 1995 national student Norms.

Table 25. Differences in National Percentile Rank (NPR) between Grade 8 White Students and other Grade 8 Racial/Ethnic Groups on the Iowa Tests of Basic Skills (ITBS), 1996-1999

| | Year | American Indian | Asian | Black | Hispanic |
|-----------------|------|--------------------|-------|-------|----------|
| Reading | | | | | |
| Total Skills | 1999 | 23.7 | 4.3 | 31.3 | 20.3 |
| | 1998 | 33.5 | 4.5 | 33.1 | 22.5 |
| | 1997 | 35.3 | 25.8 | 37.2 | 26.0 |
| | 1996 | 23.5 | 7.2 | 34.5 | 32.7 |
| Advanced Skills | 1999 | 21.0 | -4.9 | 27.3 | 21.0 |
| | 1998 | 21.2 | 3.0 | 27.0 | 21.2 |
| | 1997 | 21.5 | 20.8 | 33.1 | 24.1 |
| | 1996 | 21.1 | 10.6 | 32.6 | 29.9 |
| Language | | | | | |
| Total Skills | 1999 | 21.2 | 6.5 | 23.8 | 20.0 |
| | 1998 | 26.2 | -6.1 | 18.1 | 25.9 |
| | 1997 | 28.8 | 10.7 | 25.7 | 22.0 |
| | 1996 | 15.3 | 3.3 | 20.0 | 33.3 |
| Advanced Skills | 1999 | 23.4 | 6.9 | 24.2 | 23.4 |
| | 1998 | 22.4 | 3.4 | 17.6 | 28.1 |
| | 1997 | 28.4 | 19.0 | 28.4 | 23.9 |
| | 1996 | 12.5 | 17.3 | 21.9 | 28.5 |
| Mathematics | | | | | |
| Total Skills | 1999 | 9.1 | -0.3 | 34.3 | 20.3 |
| | 1998 | 26.6 | -14.8 | 30.2 | 20.8 |
| | 1997 | 30.2 | 2.4 | 35.0 | 32.9 |
| | 1996 | 26.2 | -3.4 | 31.6 | 31.1 |
| Advanced Skills | 1999 | 12.8 | -10.4 | 28.4 | 13.0 |
| | 1998 | 33.5 | -11.1 | 28.2 | 19.5 |
| | 1997 | 28.1 | 3.5 | 33.7 | 34.2 |
| | 1996 | 22.3 | -12.5 | 27.5 | 24.5 |
| Total | | | | | |
| Survey Battery | 1999 | 19.3 | 0.1 | 29.4 | 21.1 |
| | 1998 | 25.7 | -7.0 | 26.4 | 21.5 |
| | 1997 | 29.7 | 11.2 | 33.9 | 27.7 |
| | 1996 | 20.4 | -0.6 | 29.5 | 33.9 |

¹National Percentile Rank (NPR) for White Students minus National Percentile Ranks for other racial/ethnic groups.

Gender

Grade 5

In 1999, grade 5 male students were at or near the national average and ranked higher than female students in Reading Total Skills (49.2), Mathematics Total Skills (54.4) and Mathematics Advanced Skills (57.5) as shown in Table 26. In contrast, female students scored higher than males in Reading Advanced Skills (53.7) Language Total Skills (39.7), Language Advanced Skills (43.5), and the Total Survey Battery (46.4).

The higher scores by females in Reading Advanced Skills, Language Total Skills, Language Advanced Skills, and the Total Survey Battery suggest superior overall reading comprehension, language achievement, usage and expression, although only the Advanced Reading Skills score was at or above the national average (50).

Conversely, in 1999, male students ranked higher than female students in Reading Total Skills, Mathematics Total Skills, and Mathematics Advanced Skills, demonstrating higher overall reading mastery, higher overall mathematics mastery and superior performance in estimation, problem solving, and data interpretation.

Since 1996, grade 5 males and females have scored similarly in Reading Total Skills, with females scoring slightly higher than males in 1996 and 1997 and males scoring slightly higher than females in 1998 and 1999. In Reading Advanced Skills, female students widened the gap by five points in 1999 over that of 1997. In Language Total Skills, Language Advanced Skills and the Survey Battery Total, males students decreased the gaps in 1999 over those of 1996. Conversely, in 1999, females have closed the gap on males in Mathematics Total Skills from 1996. In 1996, female students outscored males by six points in Mathematics Advanced Skills, but in 1999 male students outscored females by over seven points in the same skill area.

Grade 8

Grade 8 female students equaled or exceeded the performance of male students on all ITBS subtests in 1999 except Reading Total Skills and Mathematics Advanced Skills; scoring 0.5 points less in Reading Total Skill, 0.2 points less in Mathematics Advanced Skills, and equaling the male score in Mathematics Total Skills (see Table 27).

Female students scored markedly higher than males in Language Total Skills and Language Advanced Skills in 1999 as they did in the three previous years. Grade 8 male and female students equaled or exceeded the national average in Mathematics Total Skills and Mathematics Advanced Skills. The female Reading Advanced Skill score was slightly above the national average while the male score on the same subtest was just below it. The 1999 results show a widening of the gender gap in Language Advanced Skills, Language Total Skills, and the Survey Battery Total over the previous year. The gap narrowed in Reading Advanced Skills, Mathematics Total Skills, and Mathematics Advanced Skills since 1998.

Table 26. National Percentile Ranks (NPRs) for Grade 5 Students in North Carolina on the Iowa Tests of Basic Skills (ITBS) by Gender, 1996-1999

| | Year | Female | Male | Difference ¹ |
|-----------------|------|--------|------|-------------------------|
| Reading | | | | |
| Total Skills | 1999 | 48.7 | 49.2 | -0.5 |
| | 1998 | 46.4 | 46.5 | -0.1 |
| | 1997 | 48.7 | 48.6 | 0.1 |
| | 1996 | 46.3 | 46.0 | 0.3 |
| Advanced Skills | 1999 | 53.7 | 48.4 | 5.3 |
| | 1998 | 53.7 | 47.9 | 5.8 |
| | 1997 | 48.4 | 48.1 | 0.3 |
| | 1996 | 48.3 | 47.7 | 0.6 |
| Language | | | | |
| Total Skills | 1999 | 39.7 | 33.4 | 6.3 |
| | 1998 | 40.1 | 31.5 | 8.6 |
| | 1997 | 39.9 | 32.9 | 7.0 |
| | 1996 | 37.3 | 29.6 | 7.7 |
| Advanced Skills | 1999 | 43.5 | 37.7 | 5.8 |
| | 1998 | 43.6 | 31.4 | 12.2 |
| | 1997 | 38.3 | 37.7 | 0.6 |
| | 1996 | 38.3 | 31.2 | 7.1 |
| Mathematics | | | | |
| Total Skills | 1999 | 53.7 | 54.4 | -0.7 |
| | 1998 | 48.1 | 53.6 | -5.5 |
| | 1997 | 47.9 | 53.5 | -5.6 |
| | 1996 | 43.3 | 47.6 | -4.3 |
| Advanced Skills | 1999 | 50.2 | 57.5 | -7.3 |
| | 1998 | 49.9 | 50.3 | -0.4 |
| | 1997 | 49.9 | 50.3 | -0.4 |
| | 1996 | 49.5 | 43.5 | 6.0 |
| Total | | | | |
| Survey Battery | 1999 | 46.4 | 44.1 | 2.3 |
| | 1998 | 43.8 | 42.7 | 1.1 |
| | 1997 | 45.6 | 41.4 | 4.2 |
| | 1996 | 42.9 | 37.4 | 5.5 |

¹Female percentage minus male percentage.

Note: National Percentile Ranks are referenced to 1995 national student Norms.

Table 27. National Percentile Ranks (NPRs) for Grade 8 Students in North Carolina on the Iowa Tests of Basic Skills (ITBS) by Gender, 1996-1999

| | Year | Female | Male | Difference ¹ |
|----------------|------|--------|------|-------------------------|
| Reading | | | | |
| Total Skills | 1999 | 49.0 | 49.5 | -0.5 |
| | 1998 | 49.4 | 52.2 | -2.8 |
| | 1997 | 49.5 | 45.2 | 4.3 |
| | 1996 | 48.9 | 48.6 | 0.3 |
| Advanced | 1999 | 50.2 | 49.8 | 0.4 |
| | 1998 | 54.7 | 49.9 | 4.8 |
| | 1997 | 50.5 | 45.3 | 5.2 |
| | 1996 | 50.4 | 49.6 | 0.8 |
| Language | | | | |
| Total Skills | 1999 | 45.8 | 32.9 | 12.9 |
| | 1998 | 45.5 | 33.0 | 12.5 |
| | 1997 | 46.2 | 33.5 | 12.7 |
| | 1996 | 46.2 | 32.6 | 13.6 |
| Advanced | 1999 | 47.3 | 40.6 | 6.7 |
| | 1998 | 46.9 | 40.7 | 6.2 |
| | 1997 | 46.9 | 38.0 | 8.9 |
| | 1996 | 46.9 | 35.1 | 11.8 |
| Mathematics | | | | |
| Total Skills | 1999 | 54.9 | 54.9 | 0 |
| | 1998 | 49.2 | 54.8 | -5.6 |
| | 1997 | 48.7 | 49.2 | -0.5 |
| | 1996 | 43.2 | 43.2 | 0 |
| Advanced | 1999 | 53.9 | 54.1 | -0.2 |
| | 1998 | 48.4 | 54.8 | -6.4 |
| | 1997 | 48.3 | 53.6 | -5.3 |
| | 1996 | 48.2 | 48.0 | 0.2 |
| Total | | | | |
| Survey Battery | 1999 | 47.9 | 43.4 | 4.5 |
| | 1998 | 47.5 | 43.8 | 3.7 |
| | 1997 | 46.4 | 41.4 | 5.0 |
| | 1996 | 44.8 | 38.7 | 6.1 |

¹Female percentage minus male percentage.

Note: National Percentile Ranks are referenced to 1995 national student Norms.

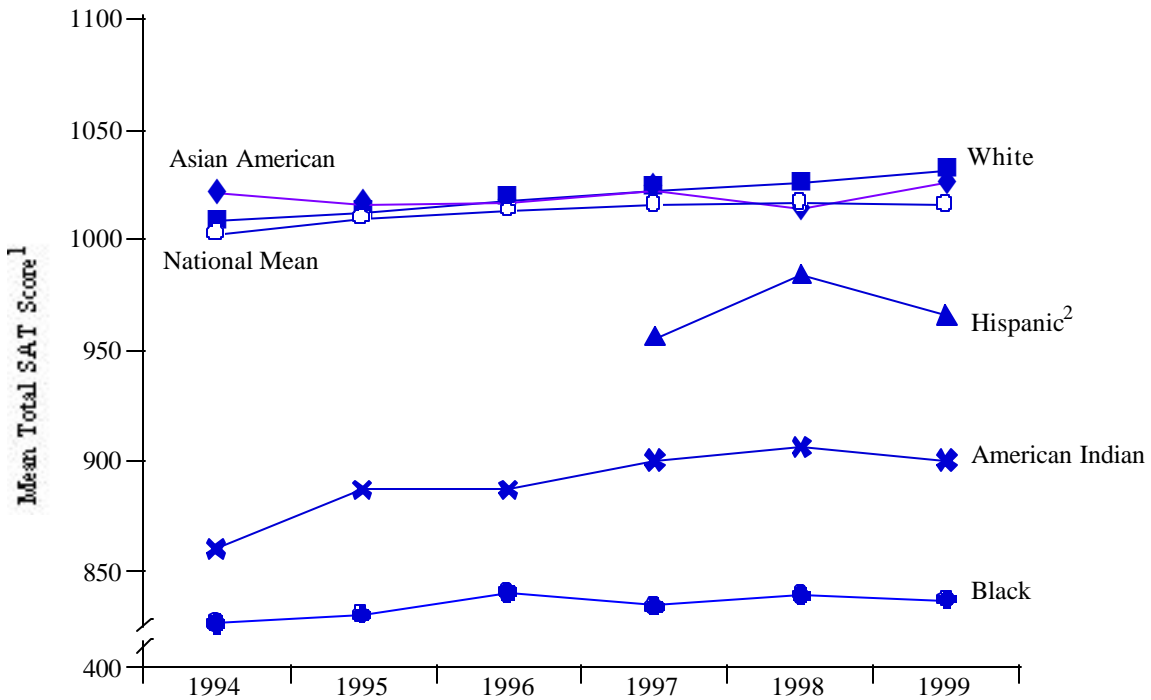
Scholastic Assessment Test (SAT)

Race/Ethnicity

Nationally, SAT takers in the graduating Class of 1999 were more racially/ethnically diverse than SAT takers who graduated from high school 10 years ago (College Board, 1999). Minority students comprised one third of SAT takers in the Class of 1999, compared to 25 percent 10 years ago (College Board, 1999). This trend might suggest that more racial and ethnic minorities are aspiring to attend college than in previous years. Table 28 shows the composition of test takers in North Carolina and the nation by racial/ethnic groups in 1999 and 1998. White students represented the majority of test takers in the state (65.9 percent) and the nation (58.8 percent), followed by Black students with 19.1 percent and 9.8 percent in the state and nation, respectively.

Historically, North Carolina's White and Asian students have scored higher on the SAT I than other racial/ethnic groups in North Carolina (see Figure 12). In 1999, White students attained the highest average total SAT score (1031), followed by Asians (1026), Hispanics (966), American Indians (900), and Blacks (837) as shown in Figure 13. When the 1999 mean total SAT scores for racial/ethnic groups are compared to the previous year's scores, some groups scored higher while others scored lower. White students scored five points higher; Asian students scored 12 points higher; while Hispanic students scored 18 points lower; Black students scored two points lower; and American Indian students scored six points lower in 1999 than in 1998 (See 1998 *State of the State* for previous year's SAT scores). In 1999, and in the previous year, all racial/ethnic groups in North Carolina scored below their national counterparts except Hispanics (see Figure 13).

Figure 12. Mean Total SAT Scores for North Carolina Students by Race/Ethnicity, 1994-1999.



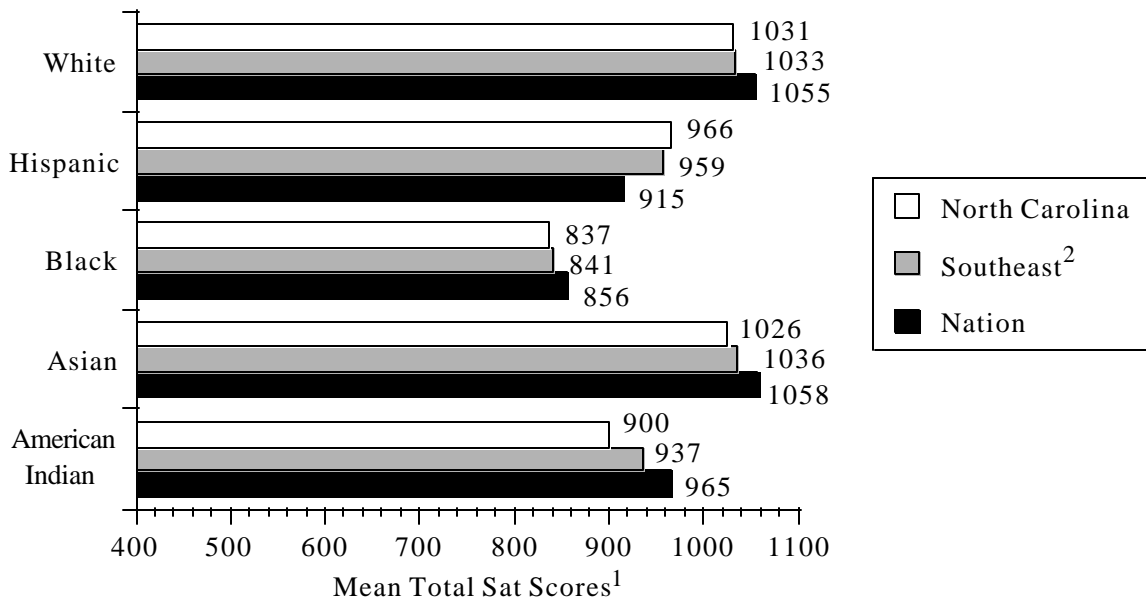
¹All Scholastic Assessment Test scores are reported on the recentered score scale (1995).

²Hispanic students were reported in the Other category prior to 1997.

Table 28. Number and Percent of Scholastic Assessment Test (SAT) Takers in North Carolina and the Nation by Race/Ethnicity, 1998-1999

| | Number and Percent of Test Takers | | | | | | | |
|-----------------|-----------------------------------|-------|--------|-------|-----------|-------|-----------|-------|
| | North Carolina | | | | Nation | | | |
| | 1999 | | 1998 | | 1999 | | 1998 | |
| | # | % | # | % | # | % | # | % |
| American Indian | 515 | 1.2 | 548 | 1.4 | 8,261 | 0.7 | 10,159 | 0.9 |
| Asian | 1,110 | 2.7 | 1,074 | 2.7 | 96,108 | 7.9 | 94,066 | 8.0 |
| Black | 7,858 | 19.1 | 7,595 | 19.0 | 119,394 | 9.8 | 114,912 | 9.8 |
| Hispanic | 580 | 1.4 | 553 | 1.4 | 94,667 | 7.8 | 90,412 | 7.7 |
| White | 27,145 | 65.9 | 26,857 | 67.1 | 717,632 | 58.8 | 704,462 | 60.1 |
| Other | 620 | 1.5 | 562 | 1.4 | 38,130 | 3.1 | 35,762 | 3.0 |
| No Response | 3,381 | 8.2 | 2,818 | 7.0 | 145,938 | 12.0 | 123,006 | 10.5 |
| Total | 41,209 | 100.0 | 40,007 | 100.0 | 1,220,130 | 101.0 | 1,172,779 | 100.0 |

Figure 13. Mean Total SAT Scores for Students in North Carolina, the Southeast, and the Nation by Race/Ethnicity, 1999.



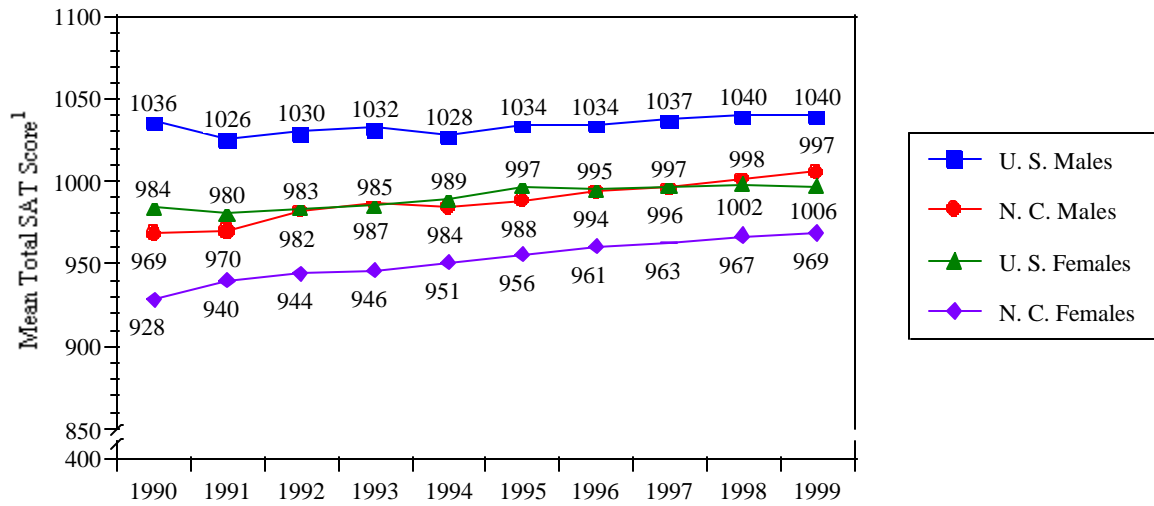
¹ All Scholastic Aptitude Test scores are reported on the recentered score scale (1995).

² Southeast values computed using weighted averages for North Carolina, South Carolina, Virginia, Georgia, and Florida.

Gender

Historically, male students have attained higher average total SAT scores than females in North Carolina (see Figure 14). The gap between male and female average SAT scores was 41 points in 1990 and 35 points in 1999, with an average gap of 35 points over the past ten years. In 1999, the average mathematics score for males (509) was 30 points higher than that for females (479) [College Board, 1998]. Average total scores for North Carolina’s male and female students have increased gradually since 1990, with a slight narrowing of the gender gap.

Figure 14. Mean Total SAT Scores for Students in North Carolina and the Nation by Gender, 1990-1999.



¹All Scholastic Assessment Test scores are reported on the recentered score scale (1995).

Advanced Placement (AP) Examination

Race/Ethnicity

White students represented the highest percentage (82.4 percent) of North Carolina’s students taking AP examinations in 1999 (see Figure 15). This percentage was 1.6 points lower than the previous year’s. The percentages of Asian (4.7), Black (8.9) and Hispanic (1.4) test takers in the state were slightly higher than the previous year’s percentages. The state’s American Indian test takers (0.6) equaled the percentage of the previous year (*State of the State*, 1998). While the percentages of minority students taking the AP Examination in 1999 equaled or exceeded those of the previous year, their percentages are still not commensurate with their overall representation in the state’s public school population. For example, although Black students make up more than 30 percent of the public school population in North Carolina, they comprised only 8.9 percent of the state’s AP Examination test takers. Conversely, Asians account for only 1.7 percent of the state’s school population, but represented nearly 5 percent of the state’s AP test takers. Nationally, a similar trend of under representation of some minority students among AP Examination test takers can be observed.

Figure 15. Percent of Students in North Carolina and the Nation Taking Advanced Placement (AP) Examinations by Race/Ethnicity, 1999.

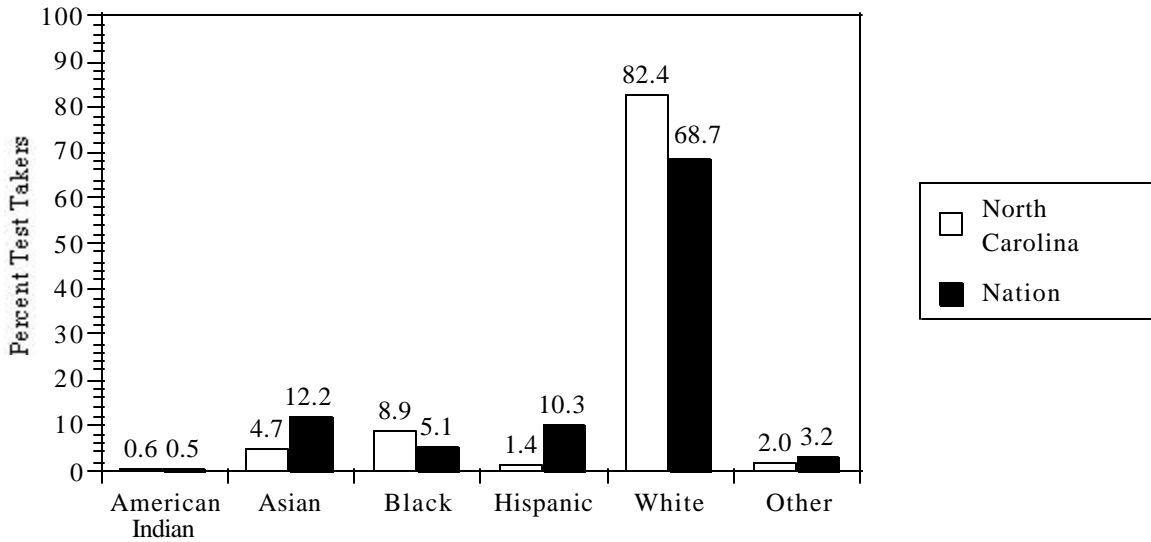
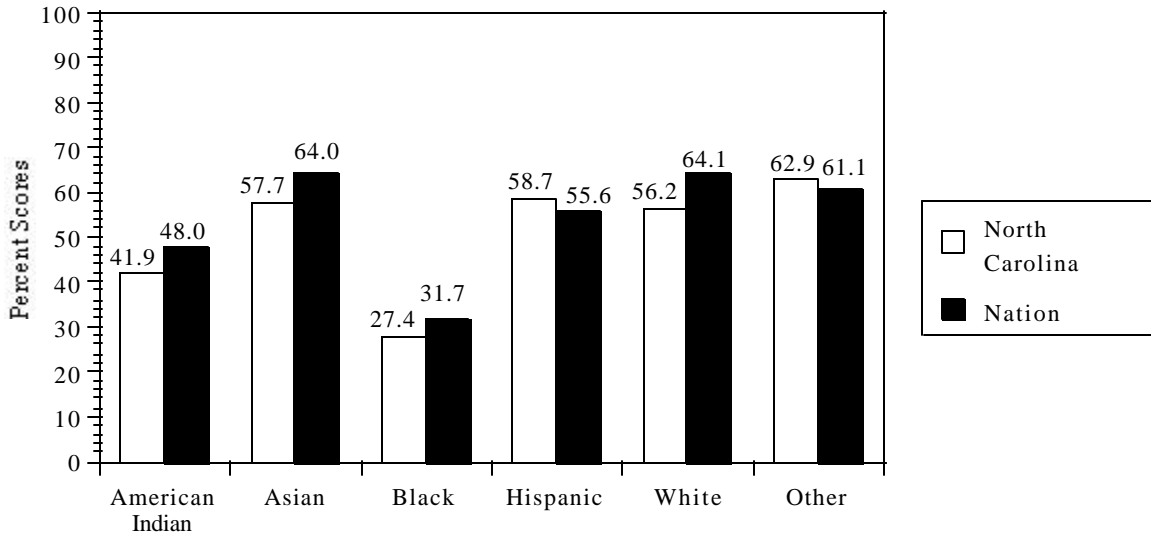


Figure 16 shows the percent of scores that were 3 or higher on Advanced Placement Examinations in North Carolina and the nation by racial/ethnic groups in 1999. The “Other” group of students made a higher percentage of scores equaling 3 or higher (62.9 percent) than any other racial/ethnic group in North Carolina. The state’s Hispanic students had the next highest percentage of scores equaling 3 or higher (58.7), followed by Asian students with 57.7 percent. However, the percentages of “Other” (2.0 percent), Hispanic (1.4 percent) and Asian (4.7 percent) students represented very small proportions of the overall test takers in the state. Black students attained the lowest percent of scores equaling three or higher (27.4 percent), nearly 2.5 points fewer than the previous year (*State of the State*, 1998). The gap between the percentage of AP Examination scores equaling 3 or higher for White students and Black students in North Carolina narrowed from 30 points in 1998 to 28.8 points in 1999. North Carolina’s Asian, White, and Black students attained lower percentages of AP Examination scores equaling 3 or higher in 1999 than in the previous year, while “Other”, Hispanic, and American Indian students increased their percentages.

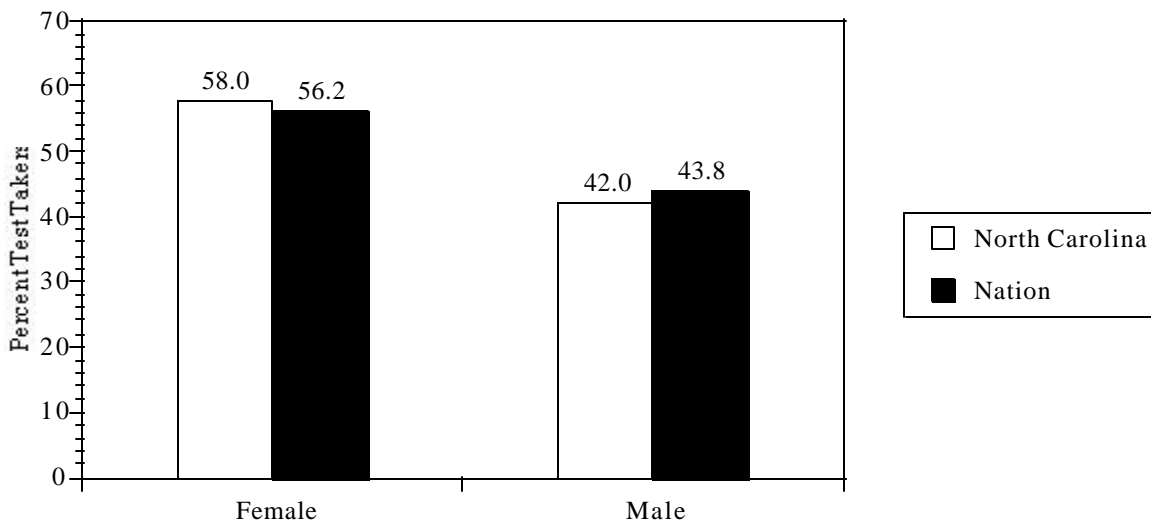
Figure 16. Percent of Advanced Placement (AP) Test Scores Equal to 3 or Higher in North Carolina and the Nation by Race/Ethnicity, 1999.



Gender

More of North Carolina's female students (58.0 percent) than male students (42%) took AP Examinations in 1999. There was a higher percentage of female test takers in the state than in the nation (56.2 percent). Conversely, more males (43.8) took the AP examinations nationally than in North Carolina as shown in Figure 17. The 1999 gender representations were very similar to those of the previous year.

Figure 17. Percent of Advanced Placement (AP) Examination Takers in North Carolina and the Nation by Gender, 1999.



Writing Assessment

Race/Ethnicity

Grade 4

Table 29 shows the percent of North Carolina's grade 4 students scoring 2.5 or higher on the Annual Writing Assessment in 1999. Grade 4 White students (61.2 percent) led all racial/ethnic groups in scores at or above the 2.5 standard in 1998-99, followed closely by Asian students (59.9 percent). The racial/ethnic groups with the next highest scores were Multi-racial (54.7 percent), Other (52.5 percent), American Indians (50.6 percent) and Hispanics (46.8 percent), with Black students (43.2 percent) scoring the lowest. All racial/ethnic groups improved their scores over the previous year (*State of the State*, 1998), with the greatest gains by American Indians (11.1 percent), Hispanics (6.3 percent) and Blacks (5.4 percent).

Table 29. Percent of North Carolina's Grade 4 Students Scoring at or above 2.5 on the Annual Writing Assessment by Race/Ethnicity, 1996-1999

| Year | American Indian | Asian | Black | Hispanic | Multi-Racial | White | Other |
|---------|-----------------|-------|-------|----------|--------------|-------|-------|
| 1998-99 | 50.6 | 59.9 | 43.2 | 46.8 | 54.7 | 61.2 | 52.5 |
| 1997-98 | 38.8 | 58.9 | 37.8 | 40.5 | 54.3 | 58.7 | 51.8 |
| 1996-97 | 41.9 | 53.2 | 36.7 | 39.7 | 51.7 | 54.3 | 48.2 |
| 1995-96 | 37.7 | 63.0 | 38.6 | 46.6 | 52.7 | 57.2 | 54.6 |

Grade 7

Table 30 shows the percent of North Carolina's grade 7 students scoring 2.5 or higher on the Annual Writing Assessment. For grade 7 students in 1999, Asian students (76.5 percent) led all racial/ethnic groups in scores at or above 2.5, followed by White students (76.1 percent), Multi-racial students (70.2 percent), American Indians (62.8 percent), Other (61.3 percent), Hispanic students (61.1 percent), and Black students (58.3 percent). All racial/ethnic groups improved their scores over the previous year, with the greatest gains by American Indians (15.2 percent), Blacks (10.7), and Hispanics (*State of the State*, 1998).

Table 30. Percent of North Carolina’s Grade 7 Students Scoring at or above 2.5 on the Annual Writing Assessment by Race/Ethnicity, 1996-1999

| Year | American Indian | Asian | Black | Hispanic | Multi-Racial | White | Other |
|---------|-----------------|-------|-------|----------|--------------|-------|-------|
| 1998-99 | 62.8 | 76.5 | 58.3 | 61.1 | 70.2 | 76.1 | 61.3 |
| 1997-98 | 47.6 | 68.7 | 47.6 | 53.1 | 64.9 | 69.7 | 56.3 |
| 1996-97 | 40.2 | 58.5 | 39.2 | 43.3 | 54.6 | 62.4 | 50.1 |
| 1995-96 | 46.3 | 66.5 | 46.4 | 52.3 | 59.6 | 65.9 | 52.2 |

Gender

Grade 4

Table 31 shows the percent of grade 4 students by gender scoring 2.5 or higher on the Annual Writing Assessment. Among grade 4 students, 61.9 percent of the female students scored at or above the 2.5 standard in 1998-99, compared with 48.4 percent of males, a difference of 13.5 percentage points. The gender gap widened by 4.1 percentage points from the previous year and by 3.2 percentage points since 1995-96.

Table 31. Percent of North Carolina’s Grade 4 Students Scoring at or above 2.5 on the Annual Writing Assessment by Gender, 1996-1999

| Year | Female | Male | Difference ¹ |
|---------|--------|------|-------------------------|
| 1998-99 | 61.9 | 48.4 | 13.5 |
| 1997-98 | 56.5 | 47.1 | 9.4 |
| 1996-97 | 56.3 | 41.1 | 15.2 |
| 1995-96 | 56.7 | 46.4 | 10.3 |

¹Female percent minus male percent

Grade 7

Table 32 shows the percent of grade 7 students scoring 2.5 or higher on the Annual Writing Assessment in 1999. For grade 7 students, 77.3 percent of the females scored at or above the 2.5 standard, 13.7 percentage points more than male students (63.6 percent). The gender gap widened by 3.0 percentage points since 1998, but narrowed by 2.1 point since 1995-96.

Table 32. Percent of North Carolina’s Grade 7 Students Scoring at or above 2.5 on the Annual Writing Assessment by Gender, 1996-1999

| Year | Female | Male | Difference ¹ |
|---------|--------|------|-------------------------|
| 1998-99 | 77.3 | 63.6 | 13.7 |
| 1997-98 | 68.0 | 57.3 | 10.7 |
| 1996-97 | 62.6 | 47.5 | 15.1 |
| 1995-96 | 67.6 | 51.8 | 15.8 |

¹Female percent minus male percent

English II Assessment

Race/Ethnicity

Grade 10

All racial/ethnic groups scored higher on the English II Writing Assessment in 1998-99 than in the three previous years (see Table 33). White students (65.2 percent) and Asian students (59.1 percent) attained the highest percent of passing scores, with Black students attaining the lowest percentage (38.8 percent). The gap between Black students and White students has remained consistent from 1995-96 to 1998-99, while the gap between White students and Hispanic students has grown slightly.

Table 33. Percent of North Carolina’s Grade 10 Students Scoring at or above 3.0 on the Annual English II Assessment by Race/Ethnicity, 1996-1999

| Year | American | | | | Hispanic | Multi-Racial | White | Other |
|---------|----------|-------|-------|----------|----------|--------------|-------|-------|
| | Indian | Asian | Black | Hispanic | | | | |
| 1998-99 | 41.1 | 59.1 | 38.8 | 47.3 | 55.5 | 65.2 | 54.9 | |
| 1997-98 | 30.0 | 51.9 | 29.1 | 37.7 | 46.5 | 53.7 | 43.5 | |
| 1996-97 | 30.1 | 57.3 | 33.1 | 42.0 | 53.4 | 57.4 | 53.9 | |
| 1995-96 | 31.6 | 58.6 | 31.0 | 42.2 | 52.0 | 56.6 | 44.9 | |

Gender

Grade 10

Table 34 shows the percent of grade 10 students scoring at or above 3.0 on the English II Assessment by gender from 1995-96 to 1998-99. A higher percentage of female students (63.3 percent) scored at or above the standard (3.0) in English II than males (50.4 percent) in 1999. This has been the trend since 1995-96. However, the gender gap has been closing steadily since 1996.

Table 34. Percent of North Carolina's Grade 10 Students Scoring at or above 3.0 on the Annual English II Assessment by Gender, 1996-1999

| Year | Female | Male | Difference ¹ |
|---------|--------|------|-------------------------|
| 1998-99 | 63.3 | 50.4 | 12.9 |
| 1997-98 | 52.6 | 39.3 | 13.3 |
| 1996-97 | 56.7 | 43.0 | 13.7 |
| 1995-96 | 56.5 | 40.7 | 15.8 |

¹Female percent minus male percent

End-of-Grade (EOG) Tests (Reading)

Race/Ethnicity

The data show that minority students are continuing to improve their performance on EOG tests. In fact, passing rates for Black students on North Carolina's EOG tests have risen by ten points over the past three years. Among the racial/ethnic groups, only American Indian students have had a larger gain on EOG tests (12.6 percent) over the same period.

Grades 3-8

Table 35 displays the percent of students who were at grade level in 1995-96 to 1998-99 by race/ethnicity. Students are considered at grade level in reading in grades 3 through 8 if their scores are within the Level III or Level IV ranges.

Among racial/ethnic groups, White students had the highest percentage of scores in reading at or above Level III for all grades in 1999, which has been the trend since 1996. All racial/ethnic groups improved their 1998 reading performances, with the most improvement shown by Other students and American Indians.

The Black-White achievement gap in reading continued to narrow in 1999, with Black students gaining an average of nearly 4 points across all grades since 1996.

Gender

Grades 3-8

Table 36 shows the percent of students scoring in Levels III or IV on Reading End-of-Grade tests by gender. Female students scored higher than males in all grades for the past four years, but males narrowed the gap in all grades from the previous year.

Table 35. Percent of North Carolina's Students Scoring in Levels III or IV on End-of-Grade (EOG) Tests in Reading by Race/Ethnicity, 1996-1999

| Year | American Indian | Asian | Black | Hispanic | Multi-Racial | White | Other |
|---------|-----------------|-------|-------|----------|--------------|-------|-------|
| Grade 3 | | | | | | | |
| 1998-99 | 64.3 | 76.6 | 57.6 | 61.3 | 77.0 | 82.1 | 55.6 |
| 1997-98 | 57.5 | 78.9 | 54.4 | 58.4 | 72.4 | 80.6 | 66.7 |
| 1996-97 | 46.2 | 72.9 | 46.2 | 51.8 | 67.1 | 75.7 | 68.8 |
| 1995-96 | 48.6 | 72.6 | 44.4 | 56.4 | *** | 74.5 | 69.4 |
| Grade 4 | | | | | | | |
| 1998-99 | 60.0 | 74.3 | 53.0 | 58.3 | 73.4 | 80.8 | 41.2 |
| 1997-98 | 52.9 | 75.7 | 52.3 | 57.3 | 72.7 | 80.2 | 57.1 |
| 1996-97 | 51.5 | 72.8 | 47.8 | 55.8 | 71.3 | 77.3 | 64.3 |
| 1995-96 | 52.9 | 75.7 | 49.0 | 63.1 | *** | 78.8 | 70.7 |
| Grade 5 | | | | | | | |
| 1998-99 | 59.3 | 78.2 | 59.5 | 63.9 | 79.2 | 83.9 | 66.7 |
| 1997-98 | 60.1 | 78.3 | 58.0 | 63.6 | 75.7 | 83.5 | 35.3 |
| 1996-97 | 53.9 | 76.8 | 51.3 | 59.1 | 73.9 | 79.8 | 69.2 |
| 1995-96 | 48.8 | 72.3 | 45.6 | 56.0 | *** | 76.0 | 68.1 |
| Grade 6 | | | | | | | |
| 1998-99 | 58.8 | 76.8 | 54.6 | 59.1 | 73.9 | 81.3 | 37.5 |
| 1997-98 | 55.9 | 75.2 | 50.3 | 55.2 | 69.4 | 79.5 | 50.0 |
| 1996-97 | 47.8 | 74.0 | 46.0 | 55.0 | 67.3 | 77.0 | 65.9 |
| 1995-96 | 47.2 | 75.2 | 47.7 | 59.8 | *** | 76.9 | 62.5 |
| Grade 7 | | | | | | | |
| 1998-99 | 62.0 | 79.3 | 59.5 | 63.5 | 78.5 | 84.9 | 68.4 |
| 1997-98 | 55.3 | 73.9 | 52.5 | 57.8 | 74.9 | 80.1 | 48.0 |
| 1996-97 | 47.8 | 70.4 | 46.8 | 55.1 | 66.9 | 77.7 | 67.8 |
| 1995-96 | 47.5 | 72.7 | 46.5 | 57.5 | *** | 76.5 | 64.8 |
| Grade 8 | | | | | | | |
| 1998-99 | 66.6 | 80.5 | 64.1 | 66.1 | 85.1 | 87.5 | 68.2 |
| 1997-98 | 64.5 | 79.2 | 63.8 | 64.7 | 83.6 | 86.9 | 57.9 |
| 1996-97 | 58.6 | 77.5 | 58.3 | 62.3 | 77.2 | 83.0 | 72.3 |
| 1995-96 | 54.7 | 75.8 | 55.0 | 62.6 | *** | 80.8 | 74.2 |

***Multi-racial data not reported prior to 1995-96.

Table 36. Percent of North Carolina's Students Scoring in Levels III or IV on End-of-Grade (EOG) Tests in Reading by Gender, 1996-1999

| Year | Female | Male | Difference ¹ |
|---------|--------|------|-------------------------|
| Grade 3 | | | |
| 1998-99 | 77.3 | 70.2 | 7.1 |
| 1997-98 | 75.2 | 68.0 | 7.2 |
| 1996-97 | 69.5 | 62.2 | 7.3 |
| 1995-96 | 68.8 | 60.8 | 8.0 |
| Grade 4 | | | |
| 1998-99 | 74.7 | 68.1 | 6.6 |
| 1997-98 | 74.7 | 67.2 | 7.5 |
| 1996-97 | 72.0 | 63.5 | 8.5 |
| 1995-96 | 73.0 | 65.9 | 7.1 |
| Grade 5 | | | |
| 1998-99 | 79.0 | 72.7 | 6.3 |
| 1997-98 | 78.5 | 71.9 | 6.6 |
| 1996-97 | 74.7 | 67.1 | 7.6 |
| 1995-96 | 70.7 | 62.5 | 8.2 |
| Grade 6 | | | |
| 1998-99 | 76.4 | 68.4 | 8.0 |
| 1997-98 | 74.3 | 65.9 | 8.4 |
| 1996-97 | 71.8 | 62.5 | 9.3 |
| 1995-96 | 73.1 | 62.6 | 10.5 |
| Grade 7 | | | |
| 1998-99 | 80.4 | 72.9 | 7.5 |
| 1997-98 | 76.1 | 66.4 | 9.7 |
| 1996-97 | 72.6 | 63.2 | 9.4 |
| 1995-96 | 73.0 | 60.9 | 12.1 |
| Grade 8 | | | |
| 1998-99 | 83.6 | 76.4 | 7.2 |
| 1997-98 | 83.2 | 75.8 | 7.4 |
| 1996-97 | 79.7 | 70.3 | 9.4 |
| 1995-96 | 78.2 | 67.1 | 11.1 |

¹Female percent minus male percent

End-of-Grade (EOG) Tests (Mathematics)

Race/Ethnicity

Grades 3-8

The percent of students proficient in mathematics by race/ethnicity from 1996 to 1999 is shown in Table 37. On EOG mathematics tests in 1999, Asian students scored higher than other racial/ethnic subgroups in all grades except grades 3 and 8, the same trend as the three previous years. In grades 3 and 8, White students represented the highest performing racial/ethnic group on the EOG mathematics tests in 1999.

All racial/ethnic groups improved their performances over the previous year, with the most progress shown by American Indian, Black, Multi-Racial, and Hispanic students, respectively. Black students closed the achievement gap across all grades in 1999 and have gained an average of nearly 8 points on White students on the mathematics EOG tests since 1996.

Gender

Grades 3-8

In 1999, more female students than male students scored in Level III or higher on EOG mathematics tests across all grades, which has been the trend since 1996 (see Table 38). In addition, the gender gap was smaller at each grade level in 1999 than in 1996, but the gap did not decrease systematically from 1996 to 1999.

Table 37. Percent of North Carolina's Students Scoring in Levels III or IV on End-of-Grade (EOG) Mathematics Tests by Race/Ethnicity, 1996-1999

| Year | American Indian | Asian | Black | Hispanic | Multi-Racial | White | Other |
|---------|-----------------|-------|-------|----------|--------------|-------|-------|
| Grade 3 | | | | | | | |
| 1998-99 | 63.5 | 81.0 | 49.9 | 59.8 | 71.2 | 80.1 | 61.1 |
| 1997-98 | 56.9 | 77.8 | 47.6 | 57.0 | 67.8 | 78.6 | 46.2 |
| 1996-97 | 52.1 | 81.5 | 49.9 | 59.6 | 70.1 | 80.2 | 72.6 |
| 1995-96 | 54.4 | 80.4 | 45.6 | 57.7 | *** | 77.7 | 74.6 |
| Grade 4 | | | | | | | |
| 1998-99 | 76.6 | 90.9 | 68.2 | 76.9 | 85.1 | 89.6 | 52.9 |
| 1997-98 | 67.4 | 88.9 | 62.7 | 70.4 | 80.7 | 87.2 | 81.0 |
| 1996-97 | 60.7 | 83.9 | 54.8 | 67.0 | 75.8 | 83.8 | 73.2 |
| 1995-96 | 57.1 | 84.4 | 49.5 | 65.6 | *** | 81.4 | 74.1 |
| Grade 5 | | | | | | | |
| 1998-99 | 70.5 | 90.6 | 68.3 | 73.8 | 83.6 | 89.3 | 78.9 |
| 1997-98 | 66.5 | 88.8 | 61.4 | 68.2 | 80.0 | 85.8 | 41.2 |
| 1996-97 | 56.7 | 85.1 | 53.6 | 62.5 | 75.0 | 82.0 | 72.0 |
| 1995-96 | 53.0 | 84.1 | 49.5 | 63.0 | *** | 79.1 | 75.5 |
| Grade 6 | | | | | | | |
| 1998-99 | 74.2 | 89.3 | 65.6 | 71.9 | 81.1 | 88.6 | 56.3 |
| 1997-98 | 72.1 | 87.4 | 61.2 | 68.0 | 78.1 | 86.3 | 65.4 |
| 1996-97 | 58.6 | 84.8 | 51.2 | 62.2 | 70.9 | 82.6 | 67.8 |
| 1995-96 | 55.1 | 84.5 | 51.0 | 64.8 | *** | 82.4 | 70.0 |
| Grade 7 | | | | | | | |
| 1998-99 | 76.1 | 90.1 | 66.9 | 74.3 | 83.7 | 89.6 | 65.0 |
| 1997-98 | 68.4 | 85.8 | 58.8 | 66.9 | 74.6 | 85.3 | 45.8 |
| 1996-97 | 55.0 | 81.7 | 48.3 | 58.5 | 70.7 | 81.0 | 71.5 |
| 1995-96 | 49.4 | 82.1 | 45.9 | 57.5 | *** | 79.1 | 66.5 |
| Grade 8 | | | | | | | |
| 1998-99 | 68.7 | 84.3 | 59.0 | 66.0 | 77.8 | 86.1 | 54.5 |
| 1997-98 | 66.0 | 83.8 | 57.1 | 65.9 | 78.9 | 84.9 | 52.6 |
| 1996-97 | 53.3 | 79.4 | 46.6 | 59.3 | 68.6 | 79.3 | 67.9 |
| 1995-96 | 47.7 | 82.0 | 44.7 | 60.0 | *** | 78.0 | 68.3 |

***Multi-Racial data not reported prior to 1996-97.

Table 38. Percent of North Carolina’s Students Scoring in Levels III or IV on End-of-Grade (EOG) Tests in Mathematics by Gender, 1996-1999

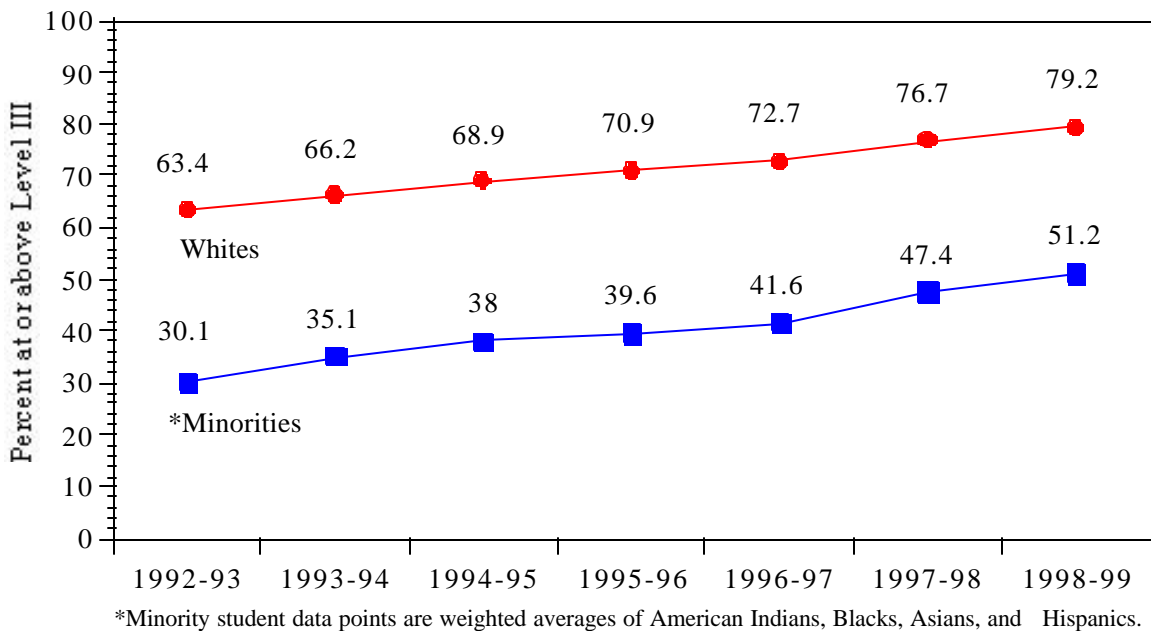
| Year | Female | Male | Difference ¹ |
|---------|--------|------|-------------------------|
| Grade 3 | | | |
| 1998-99 | 70.6 | 69.4 | 1.2 |
| 1997-98 | 68.9 | 67.4 | 1.5 |
| 1996-97 | 71.2 | 69.2 | 1.9 |
| 1995-96 | 68.4 | 66.5 | 1.9 |
| Grade 4 | | | |
| 1998-99 | 83.8 | 81.5 | 2.3 |
| 1997-98 | 80.0 | 78.5 | 4.2 |
| 1996-97 | 76.0 | 73.1 | 2.9 |
| 1995-96 | 73.1 | 70.0 | 3.1 |
| Grade 5 | | | |
| 1998-99 | 84.0 | 80.9 | 3.1 |
| 1997-98 | 79.4 | 76.7 | 2.7 |
| 1996-97 | 75.2 | 71.0 | 4.2 |
| 1995-96 | 72.2 | 67.9 | 4.3 |
| Grade 6 | | | |
| 1998-99 | 83.5 | 78.8 | 4.7 |
| 1997-98 | 81.3 | 75.5 | 5.8 |
| 1996-97 | 74.9 | 70.6 | 4.3 |
| 1995-96 | 75.3 | 69.9 | 5.4 |
| Grade 7 | | | |
| 1998-99 | 84.3 | 80.7 | 3.6 |
| 1997-98 | 79.1 | 74.9 | 4.2 |
| 1996-97 | 72.8 | 68.9 | 3.9 |
| 1995-96 | 70.6 | 66.5 | 4.1 |
| Grade 8 | | | |
| 1998-99 | 79.7 | 75.5 | 4.2 |
| 1997-98 | 78.6 | 74.1 | 4.5 |
| 1996-97 | 71.3 | 66.6 | 4.7 |
| 1995-96 | 71.0 | 64.6 | 6.4 |

¹Female percent minus male percent

EOG Achievement Gap (Proficiency in Both Reading and Mathematics)

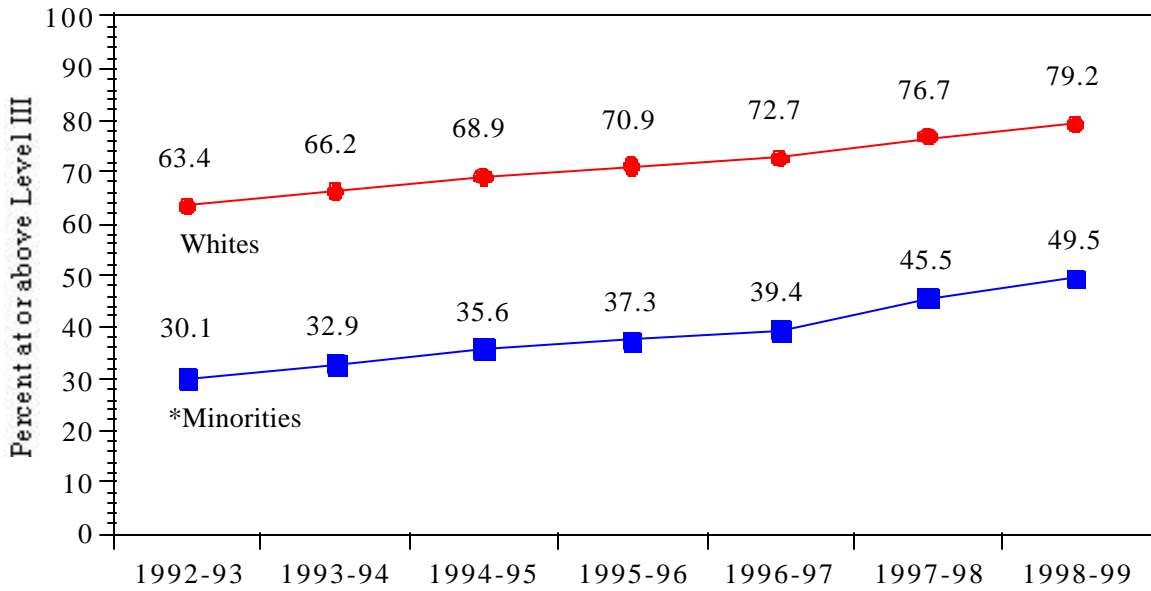
Figure 18 shows the percent of North Carolina's minority students (including Asians) and White students scoring at or above Level III in both reading and mathematics from 1993 to 1999. The graphs show that both White and minority students have made impressive progress over the past seven years on EOG tests. However, the graph also shows that while the gap has narrowed in recent years, it is still much too wide. For example, the gap was 33.3 points in 1993 and 28.0 points in 1999, a narrowing of only 5.3 points.

Figure 18. Percentages of North Carolina's Minority Students (including Asians) and White Students in Grades 3-8 Scoring at or above Level III in both Reading and Mathematics, 1993-1999.



In Figure 19, which does not include Asian students in the minority group, the achievement gap between minority and White students was 29.7 in 1999, compared to 33.3 in 1993, a difference of only 3.6 points. Thus, without Asians in the minority group, the achievement gap between minority students and White students has narrowed even less since 1993.

Figure 19. Percentages of North Carolina’s Minority Students (without Asians) and White Students in Grades 3-8 Scoring at or above Level III in both Reading and Mathematics, 1993-1999.



*Minority student data points are weighted averages of American Indians, Blacks, and Hispanics (Asians not included).

EOG Transitions by Race/Ethnicity

Another interesting way to describe End-of-Grade performance is to show the percent of students progressing to (or not progressing to) higher levels of performance from one year to the next. Such transitions for reading and mathematics EOG data by racial/ethnic groups are presented below.

American Indian Students

Table 39 shows the percent of American Indian students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. The percentage of American Indian students progressing to higher achievement levels in reading and mathematics has increased systematically since 1997. Conversely, the percentage of students remaining at level has decreased correspondingly over the same time period. In 1999, 59.7 percent, 36.7 percent, and 15.9 percent of American Indian students at Levels I, II, and III, respectively, progressed to higher achievement levels. These percentages represent increases of 10.2 percent, 10.2 percent, and 0.9 percent in the transitions out of Levels I, II, and III, respectively, since 1997. In mathematics, the percentage of American Indian students progressing to higher achievement levels in 1999 were 69.1 percent, 45.1 percent, and 20.5 percent at Levels I, II, and III, respectively. These percentages represent increases of 15.4 percent, 15.3 percent, and 5.5 percent, respectively, from 1997. Conversely, the number of students remaining at level has decreased correspondingly during the same time frame.

Table 39. Percent of American Indian Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|-----------|---------------------------------------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| | Percent Progressing to a Higher Level | | | | | |
| Level I | 49.5 | 53.7 | 58.6 | 69.4 | 59.7 | 69.1 |
| Level II | 26.5 | 29.8 | 36.3 | 43.3 | 36.7 | 45.1 |
| Level III | 15.0 | 15.0 | 19.4 | 22.1 | 15.9 | 20.5 |
| | Percent Remaining at Level | | | | | |
| Level I | 50.5 | 46.2 | 41.4 | 30.7 | 40.3 | 31.0 |
| Level II | 54.2 | 50.1 | 51.2 | 43.8 | 51.5 | 43.6 |
| Level III | 64.0 | 64.0 | 62.7 | 61.6 | 65.9 | 63.1 |
| Level IV | 68.3 | 71.6 | 70.5 | 77.2 | 64.5 | 76.0 |

Asian Students

Table 40 shows the percent of Asian students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. For Asian students, the pattern of progression to higher achievement levels from 1997 to 1999 has not been as consistent as that of other racial/ethnic groups. On average, fewer Asian students fell below level in subsequent years than other racial/ethnic groups.

Table 40. Percent of Asian Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|---------------------------------------|---------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| Percent Progressing to a Higher Level | | | | | | |
| Level I | 74.5 | 73.0 | 70.0 | 75.2 | 71.3 | 70.1 |
| Level II | 39.5 | 49.0 | 45.2 | 53.2 | 42.3 | 53.9 |
| Level III | 24.8 | 28.8 | 28.1 | 28.3 | 23.5 | 29.0 |
| Percent Remaining at Level | | | | | | |
| Level I | 25.5 | 27.0 | 29.9 | 24.8 | 28.6 | 30.0 |
| Level II | 51.5 | 44.2 | 47.1 | 38.4 | 50.7 | 38.7 |
| Level III | 64.3 | 61.6 | 63.7 | 61.0 | 64.9 | 60.3 |
| Level IV | 85.2 | 89.5 | 87.3 | 91.0 | 83.9 | 90.8 |

Black Students

Table 41 shows the percent of Black students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. Since 1997, the percentage of Black students progressing to higher levels in reading and mathematics from year to year has generally increased systematically, and the percentage remaining at level has decreased correspondingly over the same time period. For example, in 1999, 61.5 percent, 33.4 percent and 12.8 percent of Black students in Levels I, II and III reading, respectively, progressed to higher levels from the previous year. These percentages represent increases of 8.3 percent, 5.9 percent and 1.5 percent at Levels I, II and III, respectively, from those in 1997. In mathematics, the 1999 percentages represented 7.6 percent, 8.8 percent and 2.7 percent increases at Levels I, II, and III, respectively from the 1997 percentages. Although the percentages of Black students progressing to higher levels have increased since 1997, still too few are progressing to higher levels and too many are falling back below level.

Table 41. Percent of Black Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|---------------------------------------|---------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| Percent Progressing to a Higher Level | | | | | | |
| Level I | 53.2 | 55.9 | 58.9 | 62.5 | 61.5 | 63.5 |
| Level II | 27.5 | 29.7 | 34.8 | 37.0 | 33.4 | 38.5 |
| Level III | 11.3 | 12.4 | 14.7 | 15.1 | 12.8 | 15.1 |
| Percent Remaining at Level | | | | | | |
| Level I | 46.7 | 44.1 | 41.1 | 37.5 | 38.6 | 36.5 |
| Level II | 56.3 | 52.6 | 52.2 | 49.2 | 54.0 | 47.6 |
| Level III | 65.9 | 62.9 | 66.5 | 63.7 | 66.8 | 63.6 |
| Level IV | 62.9 | 68.0 | 67.8 | 71.2 | 62.4 | 71.2 |

Hispanic Students

Table 42 shows the percent of Hispanic students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. Generally, the percentages of Hispanic students progressing to higher levels from one year to the next have increased systematically from 1997 to 1999. For example, in 1999, 62.1 percent, 38.9 percent and 18.4 percent of Hispanic students in Levels I, II and III reading, respectively, progressed to higher levels from the previous year. These percentages represent increases of 2.5 percent, 5.1 percent and 1.7 percent from Levels I, II and III, respectively, over those in 1997. In mathematics, the 1999 percentage at Level I was nearly the same as in 1997; at Levels II and III, the 1999 percentages (44.6 percent and 21.2 percent, respectively) represented 3.6 percent, 2.5 percent increases, respectively, from those in 1997. Like American Indian, Multi-Racial, and Black students, too few Hispanic students are progressing to higher achievement levels and too many are falling back below level in subsequent years.

Table 42. Percent of Hispanic Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|-----------|---------------------------------------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| | Percent Progressing to a Higher Level | | | | | |
| Level I | 59.6 | 65.0 | 59.4 | 70.5 | 62.1 | 64.5 |
| Level II | 33.8 | 41.0 | 40.3 | 42.2 | 38.9 | 44.6 |
| Level III | 16.7 | 19.7 | 19.6 | 19.9 | 18.4 | 21.2 |
| | Percent Remaining at Level | | | | | |
| Level I | 40.5 | 35.0 | 40.5 | 29.5 | 38.0 | 35.5 |
| Level II | 52.0 | 47.6 | 46.4 | 45.4 | 50.3 | 44.1 |
| Level III | 68.2 | 62.8 | 66.2 | 63.7 | 66.4 | 62.7 |
| Level IV | 73.5 | 77.3 | 75.7 | 77.3 | 72.1 | 78.3 |

Multi-Racial Students

Table 43 shows the percent of Multi-Racial students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. The data shows an increase in transitions to higher levels between 1996 and 1999, but with some intervening reductions in 1998 for Multi-racial students. The percentage of Multi-racial students progressing to higher reading achievement levels in 1999 from Level I (70.1 percent), Level II (44.3 percent) and Level III (21.8 percent) exceeded the 1997 percentages by 8.6 percent, 5.0 percent, and 2.3 percent, respectively. In mathematics, the 1999 percentages exceeded the 1997 percentages by 12.1 percent from Level II and 2.2 percent from Level III. At Level I in mathematics, the 1999 percent was 4.2 percent less than the 1997 amount.

Table 43. Percent of Multi-Racial Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

| | 1996-97 | | 1997-98 | | 1998-99 | |
|---------------------------------------|---------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| Percent Progressing to a Higher Level | | | | | | |
| Level I | 61.5 | 72.2 | 58.4 | 62.5 | 70.1 | 68.0 |
| Level II | 39.3 | 35.5 | 47.1 | 45.4 | 44.3 | 47.6 |
| Level III | 19.5 | 21.1 | 24.3 | 22.6 | 21.8 | 23.3 |
| Percent Remaining at Level | | | | | | |
| Level I | 38.5 | 27.8 | 41.6 | 37.4 | 29.8 | 32.0 |
| Level II | 46.6 | 51.1 | 41.6 | 44.7 | 43.3 | 42.3 |
| Level III | 62.7 | 63.1 | 62.3 | 62.8 | 65.1 | 63.1 |
| Level IV | 77.5 | 81.6 | 77.4 | 79.5 | 76.2 | 79.7 |

White Students

Table 44 shows the percent of White students remaining at level and progressing to higher achievement levels in reading and mathematics from 1997 to 1999. White students, like most other racial/ethnic groups, showed systematic increases in percentages of students progressing to higher achievement levels in reading and mathematics from 1997 to 1999. Conversely, the percentage of students remaining at level has decreased correspondingly over the same time period. For example, the percentages of White students progressing to higher achievement levels in reading were 66.3 percent, 46.8 percent, and 25.8 percent at Levels I, II, and III, respectively. These percentages represented increases of 7.6 percent, 7.8 percent, and 2.7 percent from Levels I, II, and III, respectively, in 1997. In mathematics, the percentage of White students progressing to higher achievement levels in 1999 were 70.3 percent, 51.8 percent, and 28.6 percent from Levels I, II, and III, respectively. This represents increases of 5.4 percent, 9.3 percent, and 4.5 percent over the percentages progressing from Levels I, II, and III, respectively, in 1997. Among all racial/ethnic groups, White students and Asian students have fewer students falling back below level in subsequent years.

Table 44. Percent of White Students Remaining at Level and Progressing to Higher Achievement Levels on Reading and Mathematics End-of-Grade (EOG) Tests, 1997-1999

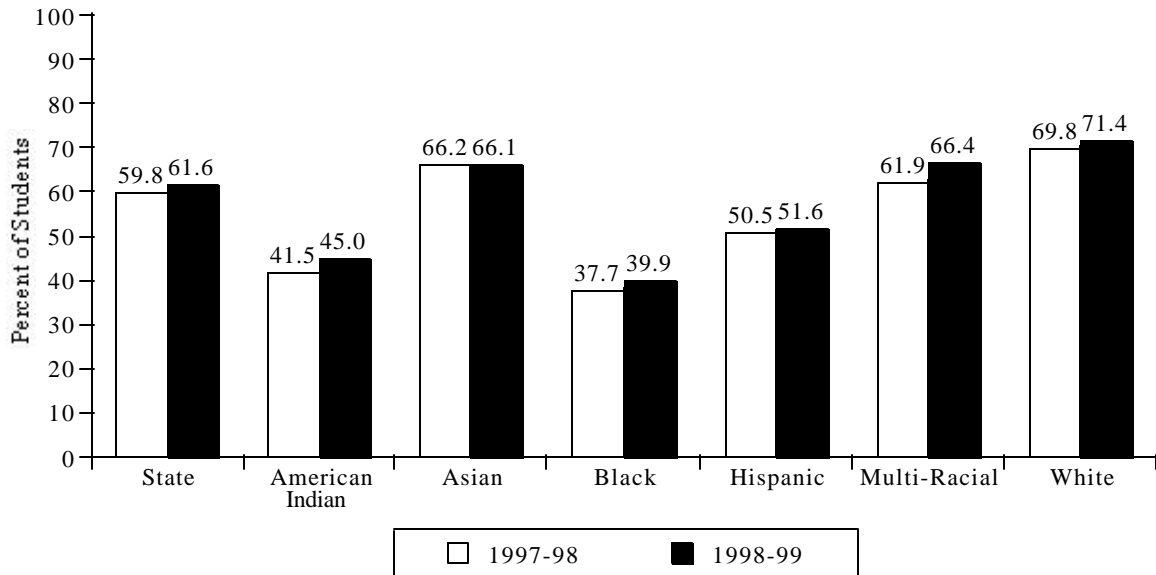
| | 1996-97 | | 1997-98 | | 1998-99 | |
|-----------|---------------------------------------|-------------|---------|-------------|---------|-------------|
| | Reading | Mathematics | Reading | Mathematics | Reading | Mathematics |
| | Percent Progressing to a Higher Level | | | | | |
| Level I | 58.7 | 64.9 | 63.1 | 68.9 | 66.3 | 70.3 |
| Level II | 39.0 | 42.5 | 46.8 | 48.6 | 46.8 | 51.8 |
| Level III | 23.1 | 24.1 | 28.1 | 26.7 | 25.8 | 28.6 |
| | Percent Remaining at Level | | | | | |
| Level I | 41.3 | 35.1 | 36.9 | 31.1 | 33.7 | 29.7 |
| Level II | 48.8 | 45.5 | 43.5 | 41.7 | 43.8 | 39.6 |
| Level III | 64.3 | 62.6 | 61.8 | 61.5 | 63.1 | 60.4 |
| Level IV | 80.4 | 83.8 | 83.5 | 85.0 | 80.5 | 86.2 |

End-of-Course (EOC) Tests

Race/Ethnicity

In 1998-99, all racial/ethnic groups improved their performance on EOC tests from the previous year except Asians, who matched their previous year's performance (see Figure 20). White students performed better than all other racial/ethnic groups, with 71.4 percent of students scoring at or above Level III. Multi-racial students and Asian students attained the next highest percentages, 66.4 percent and 66.1 percent, respectively. Black students achieved the lowest percentage of scores at or above Level III (39.9 percent), scoring nearly 32 percentage points below White students, a slight widening of the gap from the previous year.

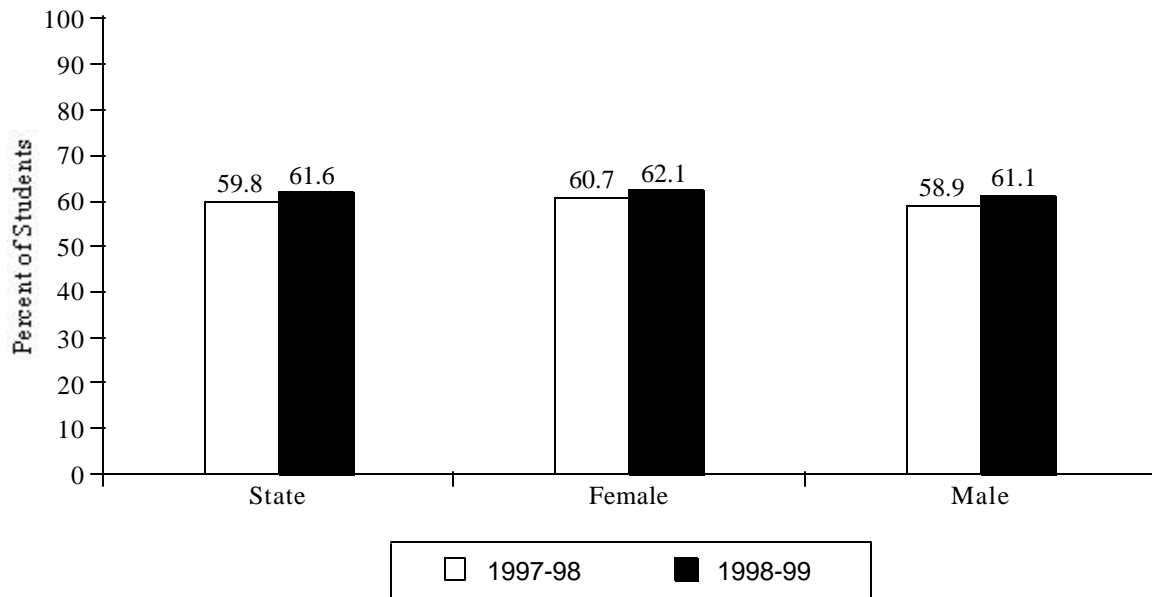
Figure 20. Percent of Students at or Above Level III on End-of-Course (EOC) Tests for the Five Core Courses (Algebra I, Biology, ELPS, English I, and U. S. History), 1997-98 to 1998-99 by Race/Ethnicity.



Gender

The percent of North Carolina's female and male students scoring at or above Level III on EOC tests for the five core courses in 1998-99 are shown in Figure 21. It can be observed that female and male students performed equally well on EOC tests in 1998-99, with female students scoring only one point higher than males. In the previous year, female students scored nearly two points higher than males.

Figure 21. Percent of Students at or Above Level III on End-of-Course (EOC) Tests for the Five Core Courses (Algebra I, Biology, ELPS, English I, and U. S. History), 1997-98 to 1998-99 by Gender.



Closing the Achievement Gap: A Rear and Windshield View

The 1999 overall achievement results for North Carolina's students, when disaggregated by race/ethnicity and gender, show some narrowing of the achievement gaps. Some data also show that minority students, especially American Indians and Blacks, are improving at a faster rate than the state overall. However, the disparity between White student and minority student achievement continues to be a troublesome issue.

Historical data show that the achievement gap has been a chronic problem in North Carolina's public schools. In a report prepared by the North Carolina Justice and Community Development Center, "Exposing the Gap: Why Minority Students Are Being Left Behind in North Carolina's Educational System," a challenge was issued to make closing the achievement gap the top priority over all other educational issues. The rationale given for this challenge was threefold. First, if the gap is not closed, minority parents will lose confidence in the state's public schools. Second, if the state is to remain competitive in a global economy, the talents and skills of all our students will be needed. Third, the achievement gap is "morally unacceptable in a modern civilized society that values education."

In a March 10, 2000 position statement on closing the gap, Michael E. Ward, State Superintendent of Public Instruction, and Philip J. Kirk, Jr., Chairman of the State Board of Education, gave another reason for closing the achievement. "If we want our schools to lead the nation in public education," they stated, "then we must address this parity issue and develop initiatives to ensure that the achievement gap closes." If North Carolina is to reach its goal of becoming first in America in education, it must also close the gap between its students and those in the nation.

A number of strategies have been initiated to close the achievement gap. One such strategy is a special pilot project involving five school districts. Under this pilot project, the state will give extra bonuses to teachers at schools where ten groups of students (6 racial/ethnic groups, 2 economic groups, and 2 achievement groups) meet growth standards similar to those in the ABCs. The project will encourage schools to work harder at getting minority students to succeed using strategies with demonstrated efficacy.

A second initiative, the Student Accountability Standards, which goes into effect next year with grade 5 students, is expected to promote minority achievement. Beginning in 2000-01 school year, North Carolina's public school students will be required to meet statewide standards for promotion in addition to local promotion requirements. The standards, or gateways, will ensure that students are working at grade level in reading, writing and mathematics before being promoted to the next grade. This initiative has the potential for changing the achievement patterns of many students through early identification and intervention for those who need help achieving grade-level proficiency. This potential for improvement has already been demonstrated through increased scores on end-of-grade and end-of-course tests among minority student groups at those school systems that have already implemented student accountability standards.

Undergirding the success of any school system is the quality of its teaching force. In recent years, North Carolina has raised teachers' salaries, offered bonuses to educators in successful schools, and awarded board-certified teachers with greater pay. The state has launched a vigorous campaign through the Excellent Schools Act to promote teacher standards and certification and to keep quality professionals in the state's classrooms.

Perhaps the first major effort in the state directed at closing the minority achievement gap was the initiation of the *Improving Minority & At-Risk Student Achievement Conference*, which meets annually. The fourth annual conference took place April 26-28, 2000, with hundreds of the state's educators meeting in Greensboro, North Carolina to share best practices and to exchange experiences regarding the improvement of achievement among minority students. The conference was organized in 1997 due to growing concerns by the state's parents, educators, and policy-makers regarding the lag in academic achievement and performance of minority students. The five goals of the 2000 conference were to:

1. Encourage local school districts to use disaggregated data to make decisions about improving schools and student performance for the purposes of narrowing and eventually closing the minority achievement gap.
2. Increase the capacity of schools, school districts, and communities to develop initiatives and strategies that improve student performance.
3. Share strategies for implementation of Student Accountability Standards.
4. Increase the capacity of schools and school districts to develop focused intervention and personal education plans for students who are performing below grade level.
5. Encourage the establishment of networks of schools and/or school districts to share best practices and resources for improving schools and student performance.

A guiding principle of the conference is that it is not *just* an event but an on-going strategy to reduce and eventually close the minority achievement gap.

The Department of Public Instruction and the State Board of Education are committed to ensuring that all students graduate from high school with the skills necessary to succeed. The initiatives that are presently underway and those envisioned for the future also reflect the Department's commitment to closing the achievement gap.

North Carolina's Public School System: Highlights of Recent Accomplishments

State and national test results since the inception of the ABCs of Public Education in 1996 show that the state's students are steadily improving in achievement and are gaining ground on their public school counterparts throughout the nation. These results suggest that the state's accountability system has had a positive overall impact on the state's public schools and that the state's principals and teachers are more focused on student outcomes than at any time in the state's history.

The outlook for education in North Carolina is bright based on this recent improvement in performance and achievement by the state's students. Another reason for optimism is the recent praise and recognition the state has garnered from lawmakers, educators, the business community, the public, and the news media for its recent educational progress. Highlights of recent accomplishments are as follows:

- In his February 22, 2000 *Seventh Annual State of American Education Address*, U. S. Secretary of Education Richard Riley referred to North Carolina's education system as a "model for the nation."
- In 1999, *Education Week* ranked North Carolina first in efforts to improve teacher quality.
- In 1998, 533 of the 1,833 board-certified teachers nationwide hailed from North Carolina, which pays teachers' fees to undergo certification.
- North Carolina accounts for about one-quarter of the teachers throughout the nation who have earned board certification since the program was founded in 1987.
- The National Education Goals Panel was one of the first national organizations to recognize North Carolina's ABCs of Public Education and the subsequent improvement in student achievement. The panel called improvements by North Carolina and Texas "significant and sustained." North Carolina and Texas led all states in the combined gains in mathematics and reading achievement on NAEP between 1990 and 1996.
- President Clinton in his January 19, 1999 State of the Union Address, touted the state's efforts to turn around low-performing schools as a model for others to emulate. In his national address, the President noted that North Carolina made the biggest gains in test scores in the nation last year.
- The National Alliance of Business' *Work America* publication reiterated the state's recognition as just one of two states realizing "significant and sustained" academic achievement in the 1990s.

- North Carolina’s accountability program and, in particular, its State Assistance Teams, was used as an example of a system that works in the December 1998 edition of *Curriculum Reform: What State Officials Say Works*, a publication produced by the Regional Educational Laboratory Network of the U. S. Department of Education.
- The state’s assistance teams were used to show how state accountability systems can “direct technical assistance and intervention to schools and districts that are foundering.” These teams work with personnel at low-performing schools to develop strategies to increase student proficiency.
- The state’s efforts to help low-performing schools also were featured in the June 23, 1999 edition of *Education Week*. State Assistance Teams, mostly comprised of local educators-on-loan, were credited with playing an important role in increasing student proficiency in schools such as Jefferson D. Diggs Elementary School in the Winston/Forsyth school system. Diggs Elementary appeared as a case study in an article on the positive benefits of hands-on aid from state education agencies.
- In the first-ever release by the National Assessment of Educational Progress (NAEP) of state-level writing scores, North Carolina’s eighth graders’ average scale score surpassed the national average by two points and the Southeast average by seven points on the 1998 National Writing Assessment.
- North Carolina was one of only five states or jurisdictions that had significant gains in fourth grade reading skills from 1992-1998, according to 1998 state reading assessment results released by NAEP. Results showed that the state’s fourth and eighth graders’ reading skills have surpassed the national and Southeast averages.
- On NAEP’s math assessment, North Carolina’s fourth graders performed above the national average, posting the highest gain in the nation on the 1996 mathematics results (tied with Texas). Eighth graders’ NAEP mathematics scores for 1996 showed the highest gain in the nation since 1990 and the second-highest gain since 1992, and their scores were well above the average in the Southeast and near the national average.
- In *Education Week’s* Quality Counts 1999 Report, North Carolina was recognized as one of two states coming the closest to having all the components of a complete accountability system (tied with Texas). *Education Week* attributed the state’s accountability program, the ABCs of Public Education, with sparking the rise in student achievement throughout the state and assisting the state’s lowest performing schools to move forward. North Carolina has consistently fared well in this national report card, earning an “A” for standards and assessments in 1997, 1998, and 1999.
- In its 1999 Report, the National Education Goals Panel placed North Carolina among the highest-performing states in the nation on three measures of progress. The panel also said North Carolina was one of the most-improved states in the nation on six

measures of progress and had improved on 14 measures overall, more than any other state.

- North Carolina received the 1999 National Alliance of Business' Distinguished Performance Award for State of the Year for turning around its education and workforce development systems to ensure that students and workers have the skills needed to drive the state's economy forward into the 21st Century. North Carolina also claimed three of five Coalition of the Year awards. The North Carolina Business Committee for Education, the Public School Forum of North Carolina, and North Carolina Partnership for Excellence all were recognized.
- The Carolina Poll [November 1997] by the UNC Journalism School showed nearly half of North Carolinians surveyed said their schools deserve either an "A" or "B" grade. Less than 12 percent said schools deserved a "D" or "F."
- North Carolinians overwhelmingly supported a \$1.8 billion bond vote for school facilities in 1996—another vote of confidence for schools.
- During the third year of the ABCs of Public Education for K-8 schools and the second year for high schools, 2,000 K-12 public schools participated. Of those schools, 58.4 percent made exemplary growth/gain; 22.9 percent made expected growth/gain; 17.7 percent received no recognition; and 0.7 percent were deemed low-performing. Overall, 81.2 percent met either expected or exemplary growth/gain standards. The number of K-8 students considered proficient in reading and mathematics increased to 69.1 percent, up 9.1 percent from 1996-97 when the ABCs were implemented.
- The 1999 SAT results showed North Carolina's average SAT score moved up four points to 986, tying the Southeast average for the first time and coming closer to the national average than it has ever been. North Carolina's students improved their scores by one point on the math portion of the test, reaching an average score of 493. Verbal scores went up three points to 493, on average. North Carolina leads the nation in points gained on the SAT from 1988-1999 among the 32 states where more than 12 percent of the students take the SAT.
- The number of North Carolina's students passing advanced placement exams in math and science is the highest ever. The Quality Education for Minorities Network recognized North Carolina for leading the nation and exceeding its contribution toward national goals for minority mathematics, science, and engineering baccalaureate degree recipients. Public schools are credited with furthering this initiative.
- North Carolina leads the nation in the number of teachers with National Board Certification – 536. The next closest state is Ohio with 337. The North Carolina Center for the Advancement of Teaching and the North Carolina Teacher Academy are national models for teacher training and helping teachers sustain and renew their

love of teaching. The 1998 Excellent Schools Act is credited with increasing teaching standards and improving the profession.

- Continuing the previous year's trend, the fifth Annual Statewide Report on School Violence show a 7.4 percent decrease in the number of overall statewide incidents with a reported 7,543 occurrences for 1997-98, down from 8,141 in 1996-97. Far less than 1 percent (0.6 percent) of students were involved in some reported school violence act, based on 7,703 offenders out of a projected 1997-98 student population of 1,226,293.
- There are 71 JobReady partnerships flourishing in 94 counties, pairing public schools with business partners, and giving students exposure to the real world of work.
- North Carolina was one of 24 states selected by the US Department of Education to receive a Teacher Quality Enhancement Grant, part of which was used to implement NC TEACH (Teachers of Excellence for All Children). NC TEACH is a comprehensive program designed to recruit, train, support, and retain highly skilled mid-career professionals with at least an undergraduate degree, who seek to enter the teaching profession. The program is administered by the UNC General Administration in collaboration with the Department of Public Instruction.
- In the Ninth Annual Status Report on the School Breakfast Program, North Carolina ranked seventh (95.2 percent) in the number of schools offering school breakfast in addition to school lunch. Leading the list was South Carolina with 98.9 percent. North Carolina also made the top ten list in the number of low-income students participating in both free or reduced-price lunch and breakfast programs – 49.1 percent. Arkansas topped the list with a 54.7 percent participation rate.

Summary

The *State of the State* report provides a mechanism for educators, students, parents, policymakers, and the public to monitor educational achievement and progress in North Carolina's public school system. The information presented in the 1999 edition provides a comprehensive overview of the achievement and progress made by North Carolina's public schools in 1999.

The 1999 test results for North Carolina's students indicate that recent educational reforms and innovative initiatives in the state's public schools have impacted positively on performance and achievement. The overall performance of the state's students on the NAEP, the ITBS, the SAT, the AP Examinations, the Competency Examinations, and the ABCs continued to show improvement over previous years. Clearly, the state's students have built on recent academic progress and are positioned for continued gains in the future.

NAEP

North Carolina's grade 8 students out-performed students in the nation and the Southeast on the 1998 NAEP writing assessment, with higher scale scores and achievement levels. Overall, the state's racial/ethnic groups also performed better than their counterparts in the nation and the Southeast.

ITBS

On the Iowa Tests of Basic Skills, the state's grade 5 students improved performance in reading, mathematics and the total battery, scoring higher than in the three previous years, and closer to the national average. In Advanced Skills, grade 5 students scored higher on all three subtests than in previous years. However, the state's overall performance in language continues to lag that of the nation. Plans are underway to strengthen language skills for the state's students. The performance of the state's grade 8 students was less impressive, but no marked drops in performance from previous years were noted. While Asian students continued to perform comparably to White students, a considerable gap remains between North Carolina's White students and other racial/ethnic students, with the greatest disparity between Black and White students.

SAT

North Carolina's students have improved performance on the SAT markedly over the past several years, attaining the highest average total score ever in 1999 and equaling the Southeast score. North Carolina's White and Asian students continued to outperform other racial/ethnic groups in the state, but their scores were below the national average. However, the gap between North Carolina's average total score and that for the nation was the smallest in 28 years in 1999.

AP Examinations

The overall performance on AP examinations was encouraging in 1999, with greater than 50 percent of the state's students receiving grades of three or higher. The AP participation rate of North Carolina's students in 1999 increased by 14 percent over the previous year.

Competency Standard

The state's students continued to perform well on the new competency standard, with passing rates in 1999 similar those in 1998. While more White students met the new competency standard in 1999 than other student groups, all racial/ethnic groups performed admirably. In the Class of 1999, nearly all students had met the competency standard.

Writing Assessment

A higher percentage of grades 4 and grade 7 students score at or above 2.5 in 1999 than in the three previous years. All grade 4 and grade 7 racial/ethnic groups performed better in writing in 1999 than in the previous year. The gender gap for grades 4 and 7 students were wider in 1999 than in the previous year.

End-of-Grade Tests

On the End-of-Grade tests, all racial/ethnic groups improved performance over the previous year in reading except Asian students. In mathematics, all racial/ethnic groups scored higher. In reading and mathematics, American Indian and Black students showed the greatest progress since 1993, with Hispanics improving more slowly.

End-of-Course Tests

North Carolina students' performance on End-of-Course tests in 1999 improved over the previous year's performance, with 50 percent or more students scoring at or above Level III in all five core courses. In addition, all racial/ethnic groups improved or equaled their performance of the previous year.

English II Assessment

On the English II Assessment, for the first time in four years, 50 percent or more of grade 10 students met or exceeded the standard (3.0) in 1999, nearly a ten-point improvement over the previous year.

According to *Education Week* (January 1999), North Carolina's recent progress in student achievement "has state education leaders convinced that this latest effort to improve the Tar Heel State's 1,997 schools is working and that the tradition of start-and-stop reforms has halted." In a similar vein, President Clinton in his 2000 State of Union

Address exclaimed, “it is time to start supporting what works and stop supporting what doesn’t.” Recent student achievement results indicate that the state’s accountability program is working and is worthy of continued support.

References

- Jacobs, Walter R. (1995). Is the SAT fair? Journal of College Admissions, 146, 22-31.
- Jencks, Christopher and Phillips, Meredith, eds. (1998). The Black-White test score gap. Washington, DC: Brookings Institution Press.
- McMillen, M. and Kaufman, P. (1997). Dropout rates in the United States: 1996. Washington, D. C: U. S. Department of Education, National Center for Education Statistics, 1997.
- North Carolina Department of Public Instruction (July, 1999). State of the state report: Education performance in North Carolina, 1998. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Department of Public Instruction (August, 1999). SAT report: the North Carolina 1999 scholastic assessment test report. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Department of Public Instruction (1998, September). Report of student performance on the North Carolina competency standard. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Department of Public Instruction (1999, August 6). The 1998-99 North Carolina preliminary state testing results: Multiple choice grade 3 pretest, end-of-grade, high school comprehensive, and end-of-course tests. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Department of Public Instruction (1999, July). Report of student performance in writing 1998-1999: Grades 4, 7, and 10. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Department of Public Instruction (1999). Report card for the ABCs of public education, volume I. Raleigh, NC: North Carolina Department of Public Instruction.
- North Carolina Justice and Community Development Center (January 2000). Exposing the gap: why minority students are being left behind in North Carolina's educational system. Raleigh, NC: North Carolina Department of Public Instruction.
- Pelligrino, J. W., Jones, L. R. and Mitchell, K. J. (Eds.) (1999). Grading the nation's report card: Evaluating NAEP and transforming the assessment of educational progress. Washington, DC: National Academy Press, p. 182.

- Powell, B. and Steelman, L. (1996). Bewitched, bothered, and bewildering: the use and misuse of state SAT and ACT scores. Harvard Educational Review, 66, 27-29.
- Public Law 100-297. (1988). National Assessment of Educational Progress Improvement Act (20 USC 1221). Washington, DC.
- Riverside Publishing Company (1994). Technical summary I: Riverside 2000. Chicago: Houghton Mifflin.
- Singham, M. (1998, September). The canary in the wine: the achievement gap between Black and White students. Phi Delta Kappan. 80, 8-15.
- The College Board. (1999, August). Academic and demographic features of 1.2 million SAT takers in the high school class of 1999. New York: Author.
- The College Board. (1999). North Carolina 1999 summary reports of college board programs and services. Atlanta: Southern Regional Office.
- The University of North Carolina (in press). Averages and quartiles of SAT scores of entering freshmen in the University of North Carolina, Fall 1999. Statistical Abstract of Higher Education in North Carolina, 1999-2000. Chapel Hill, NC.
- The University of North Carolina (in press). Average recentered SAT scores of entering freshmen in the University of North Carolina, Fall 1988-Fall 1999. Statistical Abstract of Higher Education in North Carolina, 1999-2000. Chapel Hill, NC.
- U. S. Department of Education (1999, March). Office of Educational Research and Improvement. National Center for Education Statistics. NAEP 1998 reading state report for North Carolina, NCES 1999-460 NC, by Ballator, N., Jerry, L. and Rogers, A. Washington, DC.
- U. S. Department of Education (1999, September). Office of Educational Research and Improvement. National Center for Education Statistics. The NAEP 1998 writing state report for North Carolina, NCES 1999-463 NC, by Jerry, L. and Ballator, N. Washington, DC.
- U. S. Department of Education (1999, March). Office of Educational Research and Improvement. National Center for Education Statistics. NAEP 1998 reading state report for North Carolina, NCES Publication No. 1999-460 NC, by Ballator, N., Jerry, L. and Rogers, A. Washington, DC.
- U. S. Department of Education (1997, February). Office of Educational Research and Improvement. National Center for Education Statistics. NAEP 1996 mathematics report card for the nation and states, by Reese, C., Miller, K., Mazzeo, J. and Dossey, J. Washington, DC.

- U. S. Department of Education (1997, May). Office of Educational Research and Improvement. National Center for Education Statistics. NAEP 1996 science report card for the nation and the states by O'Sullivan, C., Reese, C. and Mazzeo, J. Washington, DC.
- U. S. Department of Education (1997, September). Office of Educational Research and Improvement. National Center for Education Statistics. NAEP 1996 science state report card for North Carolina by O'Sullivan, C., Ballator, N. and Herr, F. Washington, DC.
- U. S. Department of Education (1999). National Center for Education Statistics. The condition of education 1999, NCES 99-022, Washington, DC. U. S. Government Printing Office, Indicators 11 and 12.
- U. S. Department of Education (1998). National Center for Education Statistics. The condition of education 1998, NCES 98-013, Washington, DC. U. S. Government Printing Office, Indicator 34.
- U. S. Department of Education (1996). National Center for Education Statistics. Dropout rates in the United States: 1994, NCES 96-863, by McMillen, M. and Kaufman, P. Washington, DC. U. S. Government Printing Office, Indicators 11 and 12.