



1998-99 Computer Skills Tests Results

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Background

The North Carolina Tests of Computer Skills was originally one test with two components. Under the current guidelines, the requirement consists of two tests that must be passed separately. In May 1991, the North Carolina State Board of Education, as part of the Quality Assurance Program, established a computer proficiency requirement for graduation, beginning with the Class of 2000. In October of 1995 the Board modified the requirement by making it effective beginning with the graduating class of 2001. The Board's goal in making this requirement is to ensure that: (1) most students enter high school with sufficient computer skills, and (2) no student exits North Carolina's high schools without sufficient computer skills. The requirement is based on the Computer Skills Curriculum approved in July 1992 by the State Board of Education, as defined in the North Carolina Standard Course of Study. The test was administered for the first time to eighth-grade students in the 1995-1996 school year as a local option.¹

During the 1996-97 school year, the class of 2001 was in the eighth grade. This was the first year that the NC Tests of Computer Skills were required. Students must have at least one opportunity beginning with the

eighth grade to take both tests, with subsequent opportunities during high school, as needed, to allow students to satisfy the requirement before completing their senior year in high school. Students may have no more than three opportunities during any school year to take the tests; however, seniors may have one additional opportunity during the last month of the spring semester prior to graduation. In addition, beginning with the eighth grade, a student must be provided focused instructional assistance (remediation) when the student has not demonstrated proficiency.²

Two different standards were set for the tests. During the 1996-97 school year and the summer of 1997, students were required to achieve a scale score equal to or greater than 49 on the performance part of the test and a combined scale score of at least 46; or a multiple-choice scale score of 47 and a performance scale score of 49. Under this standard, students were assigned a pass or fail for the total test. Those students who didn't meet the standard would re-take both parts of the test.

After input from educators and others, the Computer Skills Advisory Committee recommended that the computer skills test be separated into two tests. The computer

¹ NCDPI, 1996-97 Report of Student Performance, North Carolina Tests of Computer Skills, page 1.

² NCDPI, 1996-97 Report of Student Performance, North Carolina Tests of Computer Skills, page 3.

skills requirement was modified by the State Board of Education, effective July 1997. The new and current standard separates the test into two tests—multiple-choice and performance. Either test may be passed independently of the other. A scale score of 47 (or above) for multiple-choice and a scale score of 49 (or above) on performance demonstrates computer proficiency (meets the standard). Students re-take only the test that they did not pass.

As with other state tests, testing accommodations are available for students with disabilities or students who are identified under Section 504 of the Rehabilitation Act based on the students' individualized education program or section 504 plan. A limited number of accommodations are also available for students who are limited English proficient.

In some cases, students with disabilities, when documented by the Individual Education Program Committee may need to demonstrate computer proficiency through the North Carolina Computer Skills Portfolio. The portfolio is available only to students with disabilities who cannot take the test under standard administration conditions, or with the accommodations that are available for that test. When the computer skills portfolio is considered to be at the same standard as the test, then the student has met this graduation requirement.

Although the computer skills curriculum is a kindergarten through grade twelve curriculum, the computer skills test assesses skills that are to be taught in kindergarten through grade eight. The multiple-choice test assesses the nine strands of the July 1992 curriculum: (1) word processing, (2) keyboarding, (3) database use, (4) spreadsheet use, (5) telecomputing skills, (6) societal issues, (7) ethics, (8) terms,

operation, and care of computers, and (9) the use of computers in various curricular areas. The performance test assesses four strands of the curriculum: (1) keyboarding techniques, (2) word processing/editing, (3) database use, and (4) spreadsheet use. The state-mandated curriculum for computer skills is revised on a cyclical basis. The curriculum for the 1999-00 school year is a newly revised curriculum. Although a new computer skills curriculum is currently in place, the test for the 1999-2000 school year will be based on the July 1992 curriculum.

Transition to High School

High schools are meeting the needs of Wake County students for computer proficiency in a variety of ways. Some schools are providing focused intervention classes, similar to the type of classes provided for students who have not met the reading and mathematics competency requirement. Other schools are advising students to enroll in available computer application classes. All students are advised about all requirements necessary to achieve a North Carolina diploma.

To assist counselors in identifying students who have not met the computer skills requirement, the Testing Office supplies student rosters twice a year. Some counselors have expressed concern that the official transcript does not contain computer skills or competency information. Counselors have expressed some frustration about the number of hours required to identify all students who have not met the requirement and in not having sufficient resources to help all students needing assistance. Another concern is that some students don't want to take computer classes because it means giving up an elective. Our schools are challenged to identify ways to

help students meet this requirement with existing resources.

Computer Skills Results

The results reported in this bulletin reflect the status of students as of June 1999. Scores are reported by grade level, gender, race/ethnicity, and school. The report by grade level also includes a row indicated as "blank." This indicates that either (1) the student is new to the Wake County School System and no information is currently available and/or (2) the student has a disability and has been exempt from testing. As with all graduation requirements, exemption from a test does not exempt the student from the graduation requirement.

Results by Grade Level

The figure below summarizes computer skills results by grade level. Passing rates for both tests were highest for eighth grade students. As of June 1999, Wake County had a multiple-choice passing rate of 86 percent, a performance passing rate of 85.4 percent, and an overall passing rate of 82.0 percent (passed both tests).

Even though tenth-graders have had more years to pass the computer skills test, tenth-grade passing rates are somewhat lower than eighth-graders. Perhaps each incoming eighth-grade cohort has higher rates than previous cohorts because students are developing computer skills at a younger age. As noted earlier, the 1999 tenth-grade students will be the first cohort for which the computer skills tests will be part of the graduation requirements.

Figure 1
Computer Skills by Grade Level

Grade	Number of Students	Multiple-choice			Performance			Passed Both	
		Pass	Fail	Blank	Pass	Fail	Blank	Pass	Blank
8	6822	88.6%	7.0%	4.4%	87.3%	7.5%	5.2%	83.8%	16.2%
9	6999	84.3%	7.4%	8.3%	84.3%	7.3%	8.3%	80.2%	19.8%
10	5869	84.9%	3.4%	11.7%	84.4%	3.7%	11.8%	81.9%	18.1%
Wake	19690	86.0%	6.1%	8.0%	85.4%	6.3%	8.3%	82.0%	18.0%

Results by Gender

For both multiple-choice and performance tests, a slightly higher percentage of females passed the tests than males.

**Figure 2
Computer Skills by Gender**

Test	Number of Students	Multiple-choice	Performance	Passed Both
Males	10049	84.0%	83.6%	79.7%
Females	9641	88.0%	87.2%	84.3%
Wake	19690	86.0%	85.4%	82.0%

Results by Race

Passing rates varied by race/ethnicity. The percentage of students passing both tests ranged from 52.5 percent (Hispanic) to 90.6 percent (White).

**Figure 3
Computer Skills by Race**

Passed	American Indian	Asian	Black	Hispanic	Multi-Racial	White	Wake
Number of Students	41	734	5007	499	111	13298	19690
Multiple-choice	80.5%	82.2%	71.2%	57.7%	73.0%	92.9%	86.0%
Performance	78.0%	82.0%	70.2%	58.7%	69.4%	92.4%	85.4%
Passed Both	75.6%	79.2%	62.9%	52.5%	65.8%	90.6%	82.0%

Figure 4
NC Tests of Computer Skills as of June 1999
Middle Schools

School Code	School Name	Number of Students	Multiple-Choice	Performance	Both
		Grades 8	Passed	Passed	Passed
312	Apex Middle	372	87.1%	84.1%	82.8%
356	Carnage Middle	371	85.4%	87.1%	82.5%
360	Carroll Middle	264	89.8%	89.8%	86.7%
388	Daniels Middle	335	84.8%	80.3%	77.6%
391	Davis Drive Middle	319	93.1%	95.6%	92.8%
394	Dillard Middle	New School 99-00			
399	Durrant Road Middle	420	93.6%	86.7%	84.5%
400	East Cary Middle	423	95.0%	92.0%	90.5%
404	East Garner Middle	226	89.4%	84.1%	82.3%
408	East Millbrook	247	83.4%	74.5%	71.3%
410	East Wake Middle	297	85.2%	81.1%	77.1%
424	Fuquay-Varina Middle	341	85.3%	84.5%	79.5%
471	Leesville Road Middle	444	92.6%	91.4%	89.2%
472	Ligon Middle	316	89.6%	89.6%	83.9%
484	Lufkin Road Middle	New School 99-00			
492	Martin Middle	408	94.9%	93.6%	92.2%
512	North Garner Middle	302	74.8%	77.8%	69.2%
592	Wake Forest-Rolesville Middle	396	87.9%	91.2%	85.1%
604	West Cary Middle	338	91.7%	91.4%	88.5%
607	West Lake Middle	438	93.2%	95.4%	91.3%
608	West Millbrook Middle	297	88.6%	86.5%	84.2%
636	Zebulon Middle	228	81.6%	79.8%	75.4%
	Wake	19690	86.0%	85.4%	82.0%

Figure 5
NC Tests of Computer Skills as of June 1999
High Schools

School Code	School Name	Number of Students	Multiple-Choice	Performance	Both
		Grades 9-10	Passed	Passed	Passed
316	Apex High	1184	92.1%	92.3%	90.0%
318	Athens Drive High	889	83.9%	83.6%	80.7%
348	Broughton High	819	78.1%	82.8%	75.7%
368	Cary High	1060	85.0%	83.5%	80.9%
411	East Wake High	903	79.4%	78.8%	72.9%
412	Enloe High	1253	90.3%	90.2%	87.8%
428	Fuquay-Varina High	815	76.1%	74.2%	71.3%
436	Garner High	935	83.2%	84.9%	80.9%
441	Green Hope High	New School 99-00			
473	Leesville Road High	1079	90.3%	90.1%	87.9%
500	Millbrook High	896	83.8%	84.3%	79.1%
552	Sanderson @ Wakefield	876	77.3%	77.9%	75.0%
562	Southeast Raleigh High	1178	92.2%	89.3%	87.8%
588	Wake Forest-Rolesville High	859	85.6%	83.7%	80.3%
	Wake	19690	86.0%	85.4%	82.0%

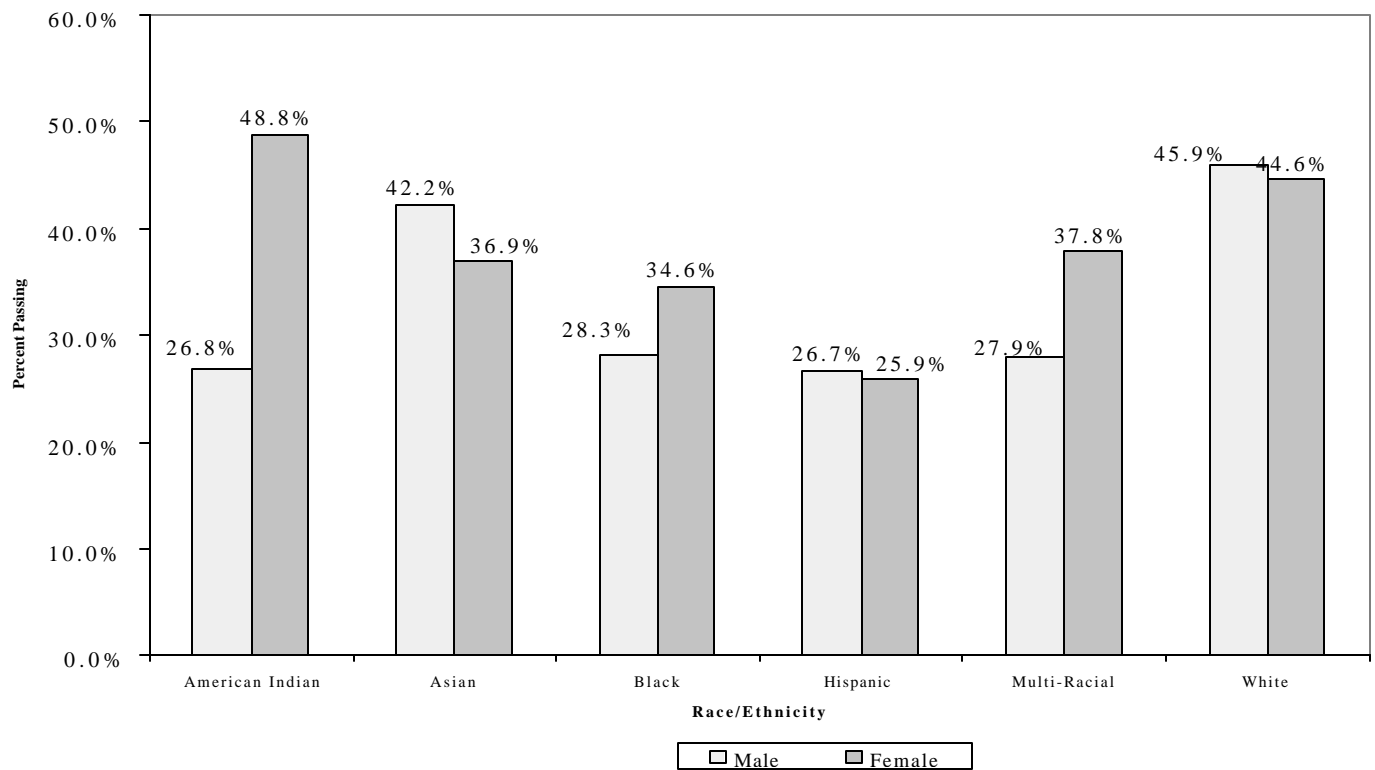
Figure 6
NC Tests of Computer Skills as of June 1999
Special Schools

School Code	School Name	Number of Students	Multiple-Choice	Performance	Both
			Passed	Passed	Passed
324	Longview School	29	20.7%	31.0%	17.2%
508	Mt. Vernon Redirection	31	48.4%	45.2%	35.5%
528	Mary E. Phillips School	102	30.4%	30.4%	23.5%
	Wake	19690	86.0%	85.4%	82.0%

Summary

Figure 7 summarizes results for Wake County for those students passing both tests by race/ethnicity and gender.

**Figure 7
1998-99 Wake County Computer Skills by Ethnicity and Gender**



This bulletin reflects the status of students in the Wake County schools as of June 1999. These results suggest:

- A higher percentage of females passed both tests compared to males.
- There is disparity among racial/ethnic subgroups in passing rates.
- Approximately 82 percent of students meet this graduation requirement at this time.