



SAT Scores, 2013-14: Wake County Public School System (WCPSS)

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Introduction

The SAT is a national college entrance examination offered by the College Board and consists of three parts: Mathematics, Critical Reading, and Writing. The top score for each part is 800, for a total possible score of 2400. Colleges use SAT scores, in conjunction with other tools, to measure students' potential for success at the post-secondary level. Although students can take the SAT multiple times, only scores from their most recently taken test are reported in College Board's College-Bound Seniors report.

In 2013-14, the overall score for WCPSS students was 1577, five points higher than in 2012-13. The state added four points (1483), and the nation lost one point for a total of 1497.

In Critical Reading, WCPSS students gained five points compared to the previous year, while the average score on the Math portion of the exam increased by one point. Writing decreased by one point.

In 2013-14, test-takers across North Carolina saw increases in scores in Critical Reading (+4 points) and Math (+1 point). Like the district, Writing also decreased by one point.

Comparisons of SAT scores and rates among districts and states should be made with caution as the total numbers of test-takers may vary greatly from district to district and state to state.

For more information about 2014 SAT statewide results, including individual school results, go to:

<http://www.dpi.state.nc.us/accountability/reporting/sat/2014>

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Abstract

In 2013-14, students in WCPSS continued to score 60-70 points higher on the SAT compared to students in NC and across the nation. All major WCPSS ethnic groups also continued to score significantly higher than their peers. Fifty-four percent of WCPSS students met the College Board's College and Career Readiness Benchmark. North Carolina had 41% of its students meeting the benchmark, while the nation had 43%.

Continued improvements on college entrance exams are likely to be driven by student exposure to rigorous curriculum and high-level coursework. Schools are encouraged to find ways to prepare all students to engage in rigorous experiences in high school.

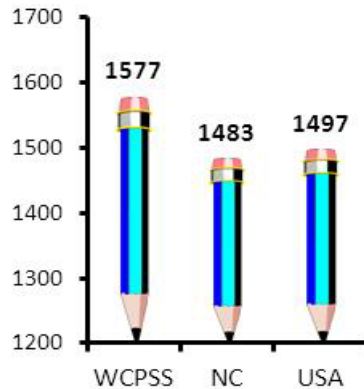
Table of Contents

Results	2
Results by Subgroups	5
Results for Large NC Districts	7
Summary	8
Appendix: Participation Rates	9
Rates by Schools	11

Results

In 2013-14, students in WCPSS posted average SAT scores of 542 in Mathematics, 528 in Critical Reading, and 507 in Writing. The combined score for Mathematics and Critical Reading was 1070, the third highest ever recorded in WCPSS. The total average score including Writing was 1577, five points higher than the year before. North Carolina total average scores went up by four points (1483), and the overall scores for the nation went down by one point to 1497.

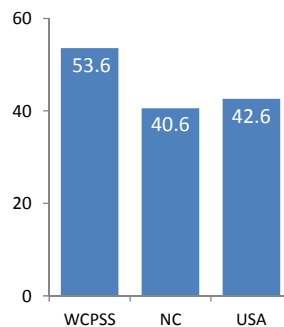
Figure 1
SAT Scores for WCPSS, NC, and USA, 2014



- Notes: 1. Scores include Mathematics, Critical Reading, and Writing.
2. Data Source: 2014 College Bound Seniors - SAT District Highlights Report by College Board.

The College Board recently established an SAT College & Career Readiness Benchmark as an indicator of whether students have the skills and knowledge critical to college and career readiness. A total (CR+M+W) score of 1550 was found to be associated with a 65% probability of earning a first-year GPA (FYGPA) of 2.67 (B-) or higher in college. A benchmark score of 500 was established as well for each of the individual sections of critical reading, math, and writing. Students reaching 1550 were found to be more likely to enroll in a four-year college, earn a higher FYGPA, persist beyond the first year of college, and complete their degree compared to peers not meeting the benchmark, according to research by the College Board (College Board, 2013). Figure 2 shows the percentage of test-takers who scored at or above 1550 in WCPSS, NC, and the US (College Board, 2014).

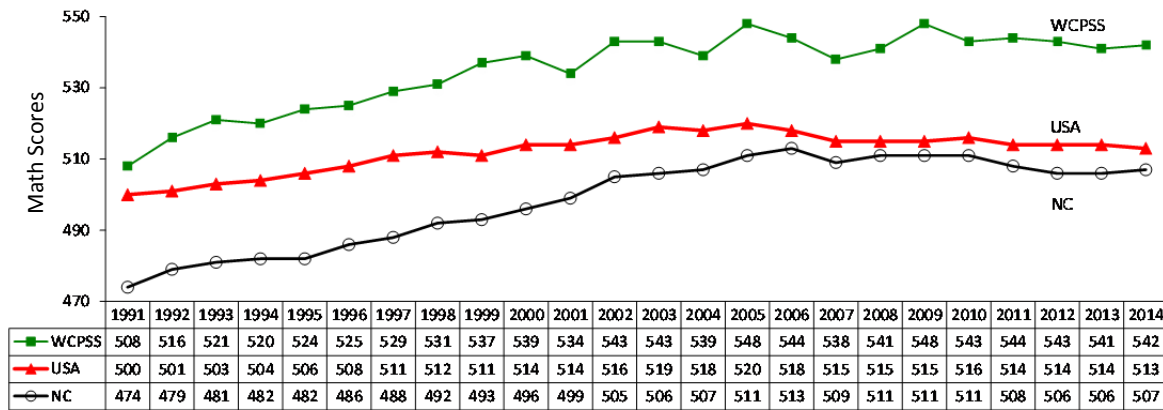
Figure 2
Percentage Meeting SAT Benchmark: WCPSS, NC, and USA, 2014



Data Source: 2014 College Board Program Results

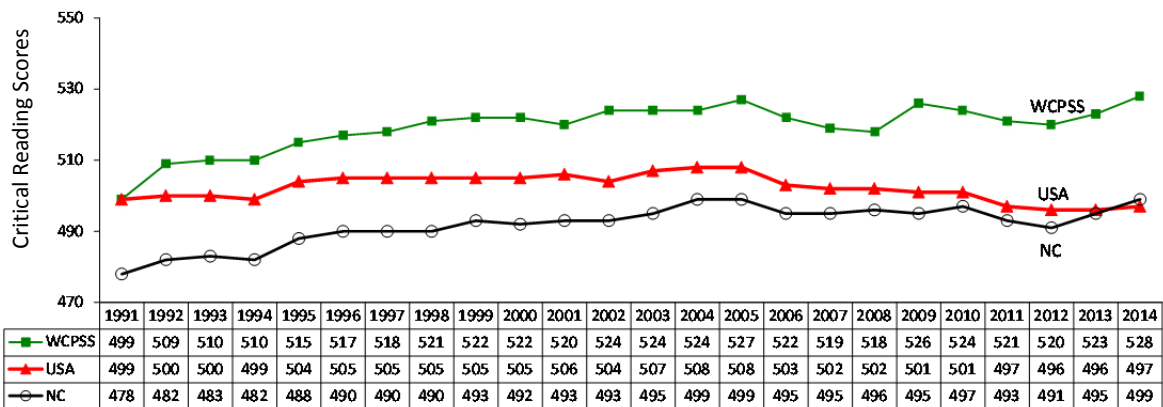
Since 1991, scores for WCPSS, NC and the nation have improved on the Mathematics portion of the test faster than they have on the Critical Reading portion. Over the same time period, trend lines show that scores in WCPSS increased 34 points in Mathematics and 29 points in Critical Reading, while the nation added 13 points to the Mathematics score but dropped 2 points in Critical Reading. Meanwhile, during the same 23-year period, the state added 33 points to the Mathematics portion and 21 points to the Critical Reading average (Figures 3 and 4).

Figure 3
WCPSS, NC, and USA, Mathematics Scores



Data Source: SAT 2014 College-Bound Seniors, District Highlights Report

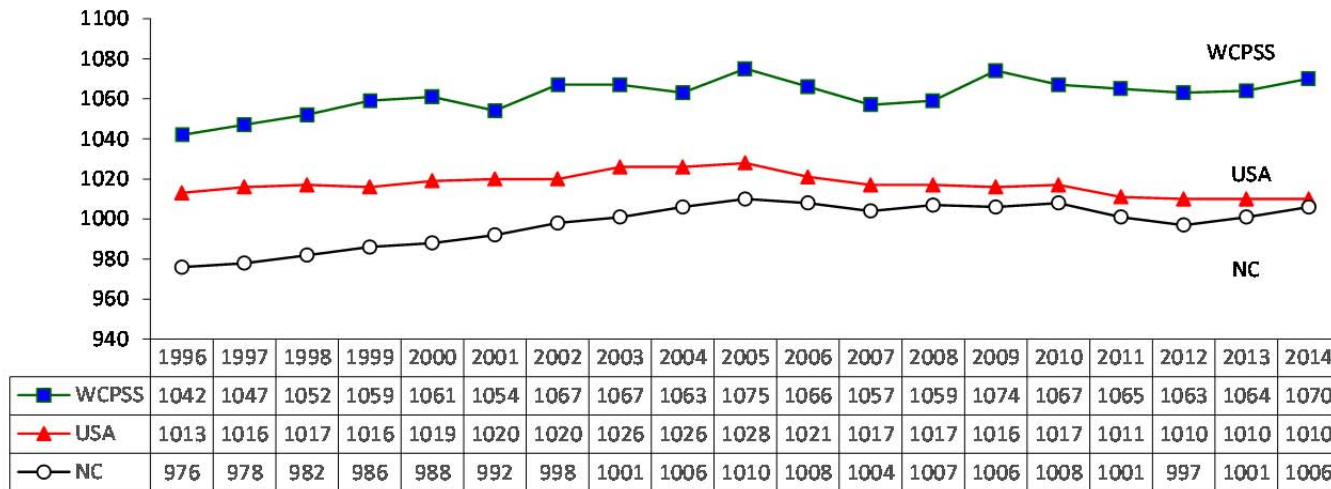
Figure 4
WCPSS, NC, and USA, Critical Reading Scores



Note: The Verbal test became the Critical Reading (CR) test in March 2005, resulting in test content changes.
Data Source: SAT 2014 College-Bound Seniors, District Highlights Report.

As the average total (Mathematics + Critical Reading) SAT scores for the nation have held steady for the past three years, the state and the district averages have increased nine points and seven points, respectively.

Figure 5
SAT Scores, 1996-2014

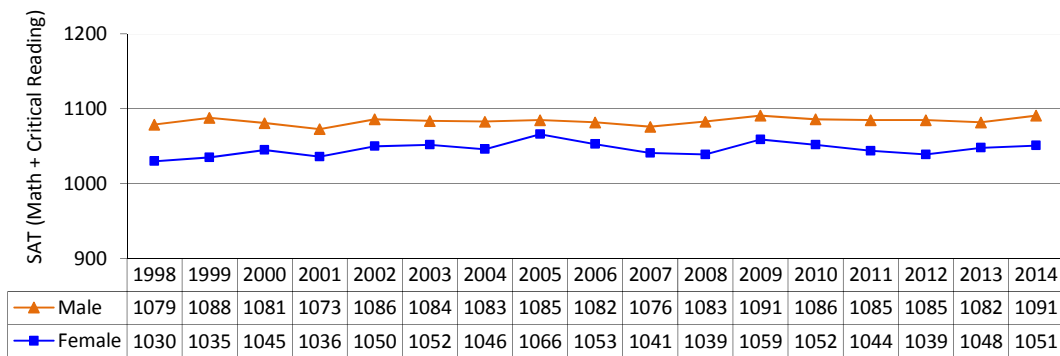


Note: Scores do not include Writing.
 For display purposes, Y-axis is truncated.
 Data Source: SAT 2014 College-Bound Seniors, District Highlights Report.

Results by Subgroups

A comparison of the average performance of male and female students in the district shows that for the combined Mathematics and Critical Reading scores, female students continue to lag behind their male counterparts (Figure 6). Even though male students scored their highest average in 2013-14, female students have increased their total score by 21 points (male students added 12 points during the same time frame). In addition, female students continue to outscore male students in Writing (512 and 501, respectively).

Figure 6
WCPSS SAT Totals by Gender, 1998-2014

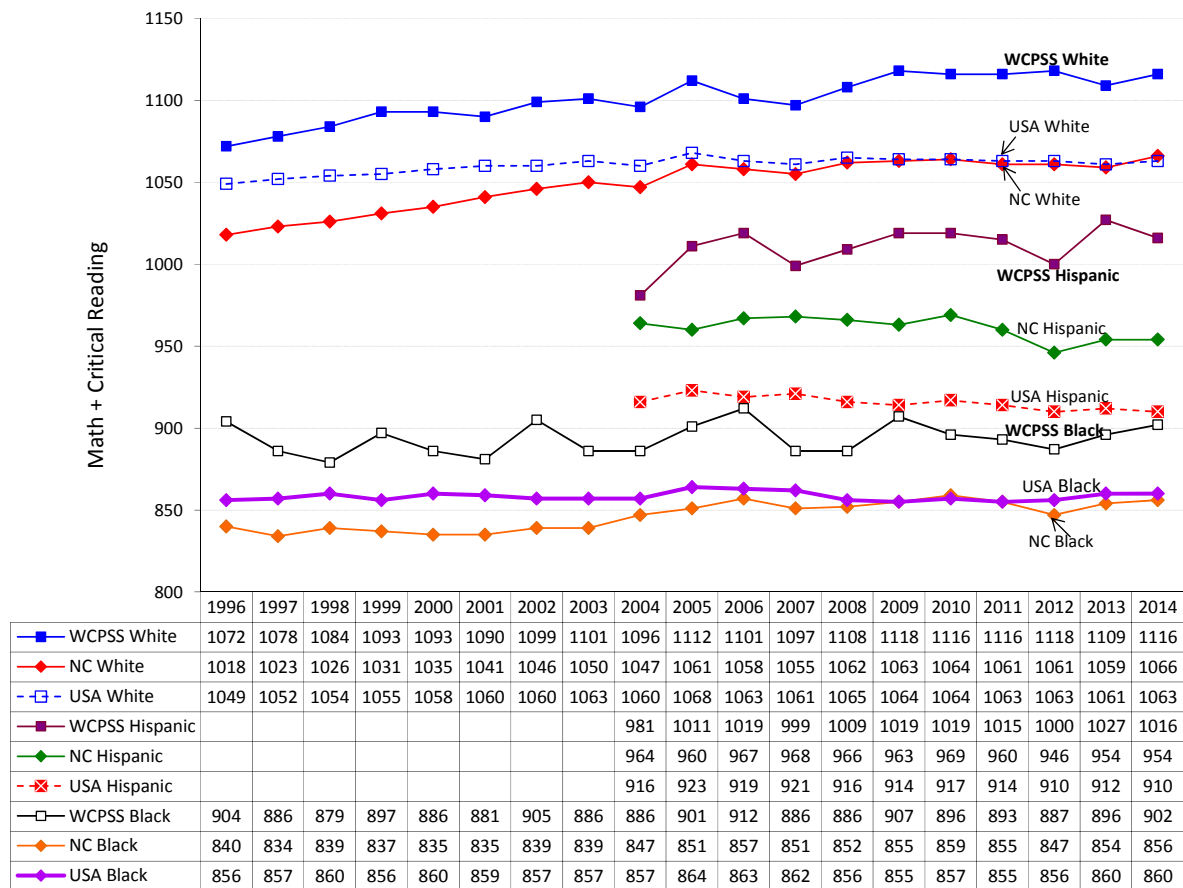


- Note: 1. Writing is not included.
 2. For display purposes, Y-axis is truncated.
 3. Data source: 2014 College Bound Seniors, SAT Data by Gender from College Board.

Consistent with recent years, more female students took the SAT than did male students, 3,365 female (53%) and 2,953 male (47%) in 2013-14.

Figure 7 shows the disaggregation of Math and Critical Reading scores by ethnicity over time. In all three large student categories, White, Black/African-American, and Hispanic/Latino, WCPSS students in 2013-14 continued to outperform their state and national counterparts. In the past 10 years, WCPSS White students have had an increase of 20 points, while North Carolina and US White students' scores increased by 19 points and 3 points, respectively. Compared to 2012-13, WCPSS Hispanic/Latino students' scores decreased by 11 points in 2013-14, although this sub-group has continued an upward trend in the past 10 years. Black/African-American students in WCPSS and NC saw moderate increases in 2013-14, however, there was no change for the nation. *Comparisons should be made with caution due to small numbers in some of the groups and also because some students choose not to report their racial/ethnic group to the College Board when they register to take the SAT.*

Figure 7
WCPSS, NC, and USA SAT Scores by Ethnicity, 1996-2014



- Note: 1. Writing is not included.
 2. For display only, Y-axis is truncated.
 3. Data source: 2014 College Board District Highlights Report.
 4. Only the three largest student groups are shown (American Indian, Asian, Pacific Islander/Hawaiian, and Multiracial are not shown).

The top five intended majors by number of WCPSS test-takers are shown in Table 1. According to College Board data, these majors were selected by more than half of WCPSS SAT test-takers. Average SAT scores are shown for each intended major.

Table 1
WCPSS SAT Test-Takers Intended Top 5 College Majors: Mean Scores

Intended Major	# Test-Takers	% Test-Takers	Math	Critical Reading	Writing
Health Professions and Related Clinical Services	1,233	21	530	512	500
Business Management, Marketing, & Related Support Services	618	10	538	514	494
Engineering (excluding Engineering Tech/Technicians)	585	10	602	553	527
Biological and Biomedical Sciences	499	8	569	551	535
Visual and Performing Arts	429	7	527	528	506

Data source: 2014 College Board District Highlights Report.

Results for Large NC Districts

Table 2 compares two years of WCPSS SAT outcomes with those of comparable large school districts across the state. WCPSS students continued to achieve the highest overall scores. WCPSS also outperformed all other large NC school districts in Math, Critical Reading, and Writing. However, WCPSS and five comparison large school districts in NC experienced a dip in participation rates in 2013-14. Forsyth, the exception, had a 1.8 percentage point increase. See Appendix for more information on participation rates.

Table 2
Comparison of WCPSS SAT Scores to Other Large NC Districts

LEA	2014					2013				
	Math	Critical Reading	Writing	Math + Critical Reading + Writing	Part. Rate	Math	Critical Reading	Writing	Math + Critical Reading + Writing	Part. Rate
WCPSS	542	528	507	1577	65.8	541	523	508	1572	67.0
Union	526	506	492	1524	65.7	523	506	495	1524	66.8
Charlotte-Mecklenburg	511	503	483	1497	56.1	503	493	477	1473	59.7
Forsyth	503	493	471	1467	58.5	505	495	478	1478	56.7
Guilford	491	482	462	1435	66.7	488	481	464	1433	67.6
Durham	476	476	454	1406	61.8	484	481	461	1426	64.5
Cumberland	465	467	441	1373	50.3	461	464	442	1367	53.7

Data Source: DPI 2014 SAT report (Districts and Schools Listings)

Note: All participation rates in this table are from the NC DPI school listings list with the exception of WCPSS, see Appendix for more information.

Summary

SAT performance in WCPSS remains high compared to state and national averages. WCPSS students in various racial/ethnic categories continue to outperform their peers statewide and nationwide by large margins.

The College Board recently established a benchmark for college and career readiness. In 2014, 54% of WCPSS students met that benchmark, significantly higher than the NC or US percentages.

Continued improvements on college entrance exams are likely to be driven by student exposure to rigorous curriculum and high-level coursework (ACT, 2013; Deng & Kobrin, 2007). Therefore, schools are encouraged to find ways to prepare all students to engage in rigorous experiences in high school. While college entrance exam scores are important for individuals in terms of college acceptance, they also serve a role as an indicator of how well the school system is preparing all students for post-secondary success.

References

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Appendix

Participation Rates: WCPSS, NC, and US

In 2011-12, the NC Department of Public Instruction began administering the ACT assessment to 11th-grade students. The ACT, which is provided free of charge in NC, became part of North Carolina's school accountability program in 2012-13. Like the SAT, the ACT is also a college admissions assessment. Although SAT participation rates in WCPSS remain higher than the national and statewide rates, the drop seen in SAT participation rates in the past three years (see Table A1) is likely related to this shift, as students applying to UNC system colleges may submit either SAT or ACT results to be considered for admission.

Historically, the percentage of students in WCPSS taking the SAT has been significantly higher than the state and national rates. Since 1991, the WCPSS participation rate has been at or above 70% in every year except four. During the same time frame, the state's rate has improved somewhat but has been at or above 70% in only four of those years. The nation's participation rate has been improving, albeit slowly, from a low of 42% in 1991 to 52% in 2014 (Table A1). WCPSS, NC, and national participation rate comparisons should be made with caution since calculations are based on different methods. For an explanation of how the rates are calculated, see accompanying footnotes in Table A1.

Table A1
WCPSS, NC, and USA SAT Scores and Participation Rates: 1991-2014

Year	WCPSS				NC				USA			
	Total	Math	Verbal*	Rate	Total	Math	Verbal*	Rate**	Total	Math	Verbal*	Rate**
1991	1007	508	499	75	952	474	478	57	999	500	499	42
1992	1025	516	509	74	961	479	482	57	1001	501	500	42
1993	1031	521	510	76	964	481	483	60	1003	503	500	43
1994	1030	520	510	75	964	482	482	60	1003	504	499	42
1995	1039	524	515	76	970	482	488	60	1010	506	504	41
1996	1042	525	517	73	976	486	490	59	1013	508	505	41
1997	1047	529	518	74	978	488	490	59	1016	511	505	42
1998	1052	531	521	76	982	492	490	62	1017	512	505	43
1999	1059	537	522	76	986	493	493	61	1016	511	505	43
2000	1061	539	522	79	988	496	492	64	1019	514	505	44
2001	1054	534	520	79	992	499	493	65	1020	514	506	45
2002	1067	543	524	79	998	505	493	67	1020	516	504	46
2003	1067	543	524	80	1001	506	495	68	1026	519	507	48
2004	1063	539	524	77	1006	507	499	70	1026	518	508	48
2005	1075	548	527	75	1010	511	499	74	1028	520	508	49
			CR*				CR*				CR*	
2006	1066	544	522	77	1008	513	495	71	1021	518	503	48
2007	1057	538	519	79	1004	509	495	71	1017	515	502	48
2008	1059	541	518	73	1007	511	496	63	1017	515	502	45
2009	1074	548	526	64	1006	511	495	63	1016	515	501	46
2010	1067	543	524	69	1008	511	497	63	1017	516	501	47
2011	1065	544	521	74	1001	508	493	67	1011	514	497	50
2012	1063	543	520	76	997	506	491	68	1010	514	496	52
2013	1064	541	523	67	1001	506	495	62	1010	514	496	50
2014	1070	542	528	66	1006	507	499	**64	1010	513	497	**52

* The Verbal test became the Critical Reading (CR) test in March 2005, resulting in test content changes.

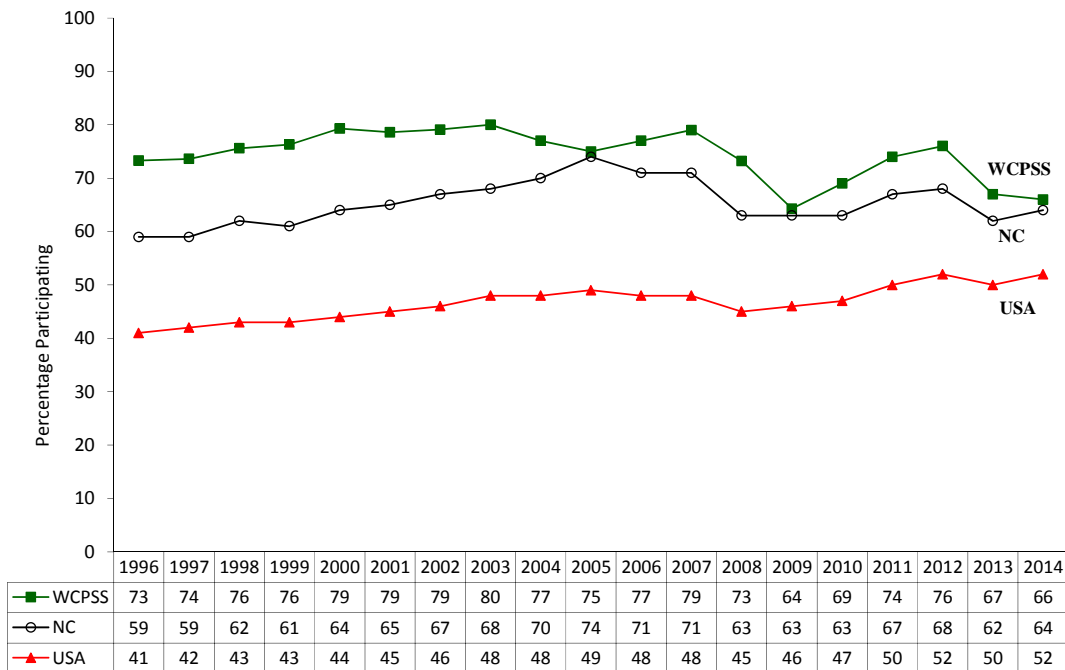
** The NC and US participation rates include public and private schools. For 2013-14, the calculations are based on high school graduate projections by the Western Interstate Commission for Higher Education published in "Knocking at the College Door" (December, 2012). WCPSS calculations are based on actual numbers of students who graduated. The NC DPI uses NC and US participation rates provided by the College Board.

Note: In 2011, College Board changed the cut-off date to include students tested through June of each year. Prior to 2011, data included students tested through March only.

When the actual number of graduates was not known, participation rates reported by the North Carolina Department of Public Instruction (NCDPI) are used. SAT participation rates reported by the College Board are based upon estimates of counts of graduating seniors compiled through national surveys. For 2013-14, NC DPI used the 4th-month Average Daily Membership (ADM) for 12th- and 13th-grade students to calculate SAT participation rates, rather than the actual numbers of graduates. Whenever the actual number of graduates is known, WCPSS uses that count to calculate participation rates.

Participation data since 1996 for WCPSS, NC, and the nation are depicted in Figure A1. Recent declining participation rates in WCPSS, as well as other districts in the state, are likely to have been influenced by the universal participation of juniors taking the ACT. In 2013-14 the NC participation rate increased slightly while WCPSS' rate dropped by one point. As mentioned earlier, calculations for SAT participation are based on different methods. See Table A1 and its accompanying footnotes for more information.

Figure A1
SAT Participation Rates, 1996-2014



Note: 1. The NC and USA participation rates include private and public schools. WCPSS participation rate is the percentage of graduating students who took the SAT.
2. Data Source: 2014 College Bound Seniors - SAT Report from College Board.

WCPSS SAT Rates by School

Table A2
2014 Number of SAT Test-Takers and Participation Rates:
WCPSS High Schools

High School	Graduates	# of SAT Takers	Participation Rate
Apex	539	419	77.74%
Athens Drive	423	289	68.32%
Broughton	410	301	73.41%
Cary High	515	280	54.37%
Enloe	570	393	68.95%
East Wake School of Arts, Education & Global Studies	93	33	35.48%
East Wake School of Engineering Systems	83	38	45.78%
East Wake School of Health Science	89	48	53.93%
East Wake School of Integrated Technology	64	22	34.38%
Fuquay-Varina	401	197	49.13%
Garner	516	276	53.49%
Green Hope	498	451	90.56%
Heritage	418	282	67.46%
Holly Springs	535	389	72.71%
Knightdale	362	150	41.44%
Leesville Road	514	393	76.46%
Middle Creek	445	273	61.35%
Millbrook	601	414	68.89%
Panther Creek	577	446	77.30%
Sanderson	466	302	64.81%
Southeast Raleigh	364	234	64.29%
Wake Early College of Health and Sciences	40	40**	100.00%
Wake Forest	454	288	63.44%
Wakefield	552	366	66.30%

Note: Because of low N's, alternative high schools have been removed from this list.

**The number of graduating senior test-takers reported by the College Board and NC DPI has been reduced to reflect the actual number of graduates from Wake Early College of Health and Sciences. NC State STEM Early College did not have graduates in the 2013-14 school year.