



SAT Scores, 2012-13: Wake County Public School System (WCPSS)

(Revised November 2014, see pages 3)

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Background

The SAT is a national examination offered by the College Board consisting of three parts: Mathematics, Critical Reading, and Writing. The top score for each part of the SAT 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 students’ scores from their most recently taken test are reported in College Board’s College-Bound Seniors report.

In 2012-13, WCPSS students made gains, compared to the previous year, of three points in Critical Reading and six points in Writing. The average score on the Math portion of the exam went down two points compared to 2011-12.

Test-takers across North Carolina saw increases in scores in Writing and Critical Reading, but Math scores did not change in 2012-13. Although the total average score in North Carolina improved, the average total score nationally did not change.

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 2013 SAT statewide results, including individual school results, go to:
<http://www.dpi.state.nc.us/accountability/reporting/sat/2013>

Abstract

In 2012-13, students in WCPSS continued to score 50-60 points higher on the SAT compared to students in NC and across the nation. Most major WCPSS ethnic groups also continued to score significantly higher than their peers. Trends in performance on college entrance exams such as the SAT represent important metrics for monitoring how well the system is preparing all students for post-secondary success.

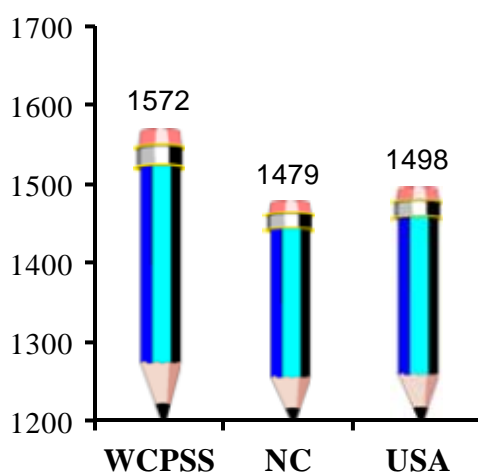
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WCPSS Results

In 2012-13, students in WCPSS posted average SAT scores of 541 in Mathematics, 523 in Critical Reading and 508 in Writing. The combined score for Mathematics and Critical Reading was 1064, with the total average score including Writing rising to 1572, seven points higher than the year before. Scores remained the same for the nation, but the state saw an increase of 10 points to 1479. Note that some of the tables and figures in this report do not include writing data.

Figure 1
SAT Scores for WCPSS, NC, and USA, 2013



- Notes: 1. Scores comprise Mathematics, Critical Reading, and Writing.
2. Data Source: Department of Public Instruction (DPI) 2013 SAT report (Districts and Schools Listings spreadsheet at: <http://www.dpi.state.nc.us/accountability/reporting/sat/2013>); updated January 2014.

In 1991, WCPSS exceeded the national Mathematics and Critical Reading average scores by 8 points. By 2012-13, the district exceeded the national average scores by 54 points. Similarly, in 1991 WCPSS exceeded the state average scores by 55 points; by 2012-13, the difference was 63 points (Table 1).

Since 1991, scores across the nation, state, and WCPSS have improved on the Mathematics portion of the test faster than they have on the Critical Reading portion. Over the same time period, 2012-13 results show that scores in WCPSS increased 33 points in Mathematics and 24 points in Reading while the nation added 14 points to the Mathematics score but dropped 3 points in the Critical Reading score. Meanwhile, during the same 23 year period, the state added 32 points to the Mathematics portion and 17 points on the Critical Reading average (Table 1).

Table 1
WCPSS, NC, and USA SAT Scores and Participation Rates: 1991-2013

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

* 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 (also see note 3 below).

Notes: 1. WCPSS participation rate is the percentage of actual graduating students who took the SAT.

2. 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.

3. Data Source: Department of Public Instruction (DPI) 2013 SAT report (Districts and Schools Listings)

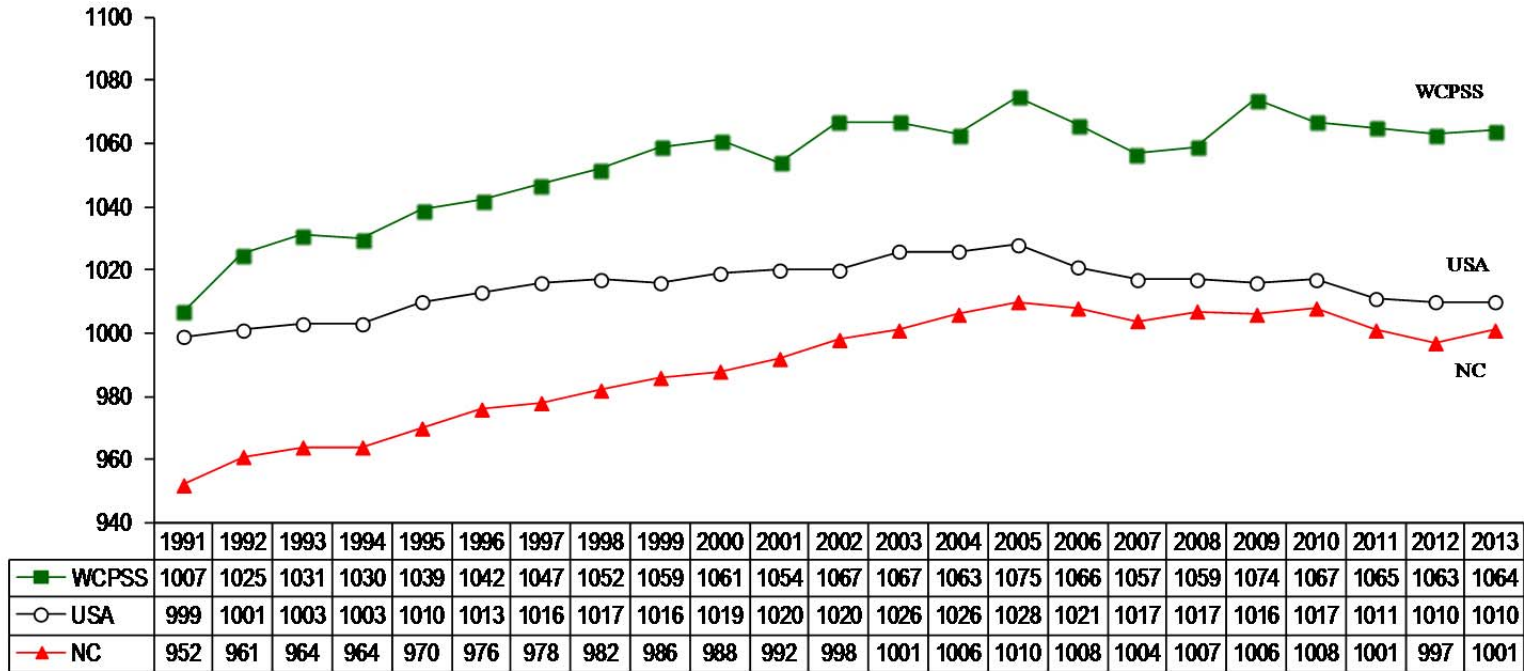
When the actual number of graduates was not known, participation rates reported by the North Carolina Department of Public Instruction (NCDPI) are used. SAT participation rates reported by the College Board are based upon estimates of counts of graduating seniors compiled through national surveys. While the College Board rates are probably accurate at the state and national level, they are not accurate at the district and individual school level. NC DPI uses the final 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.

+November 21, 2014: Revised rates here and any other references to reflect percentages of WCPSS actual graduates who took the SAT.

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Over the past 23 years, the average SAT combined score (Mathematics and Critical Reading) for WCPSS students has risen from 1007 to 1064. In the same time frame, the average score for North Carolina has risen from 952 to 1001, while the national average score has fluctuated between 999 and 1028 (see Figure 2).

Figure 2
SAT Scores, 1991-2013

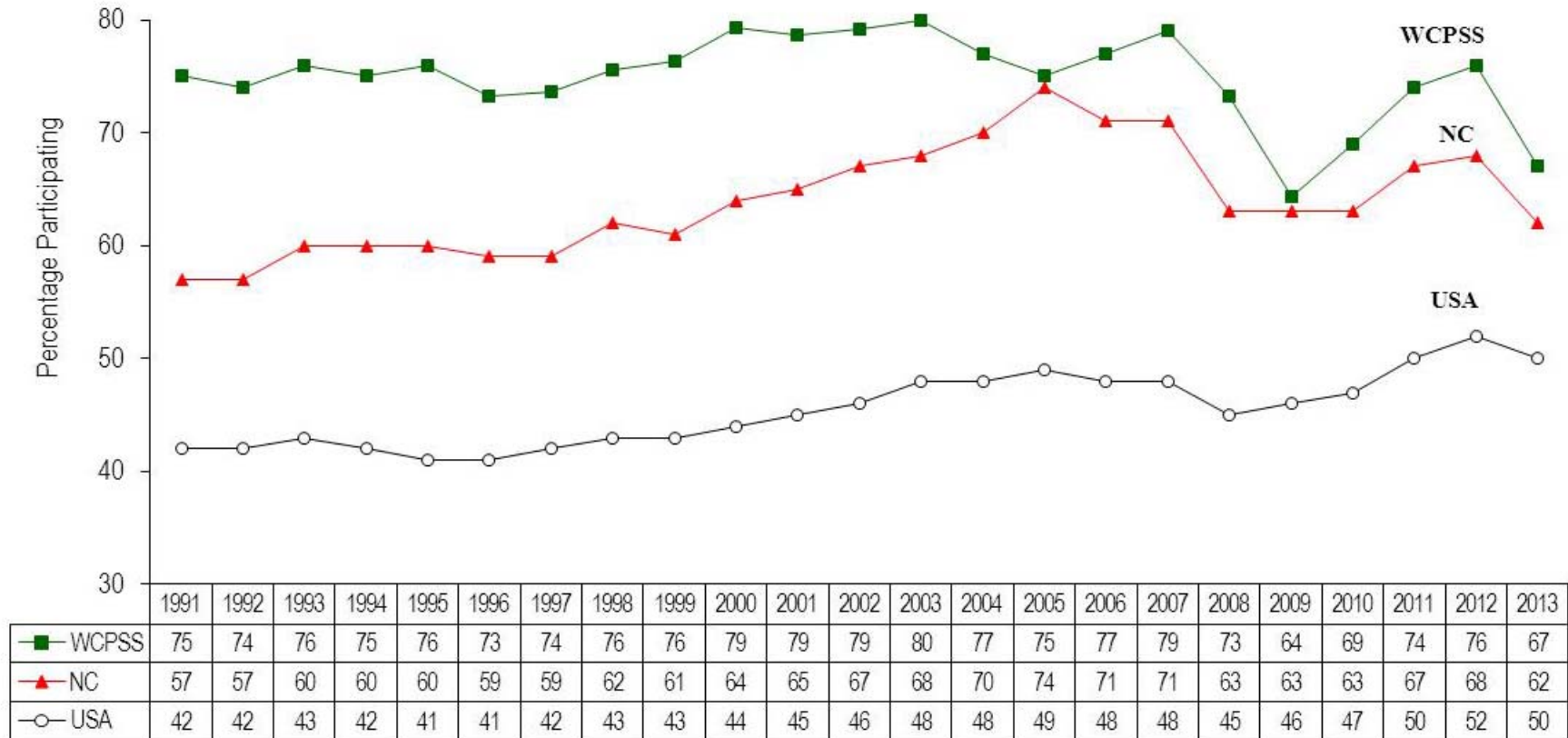


Note: Scores do not include Writing.

Data Source: DPI 2013 SAT report (Districts and Schools Listings).

WCPSS SAT participation rates have been above 70% in 20 of the last 23 years. Nationally, the rate has risen from the low 40s to the low 50s in the last three years. The North Carolina rate has been mostly in the 60s during the same time period. Participation data since 1991 are depicted in Figure 3.

Figure 3
SAT Participation Rates, 1991-2013



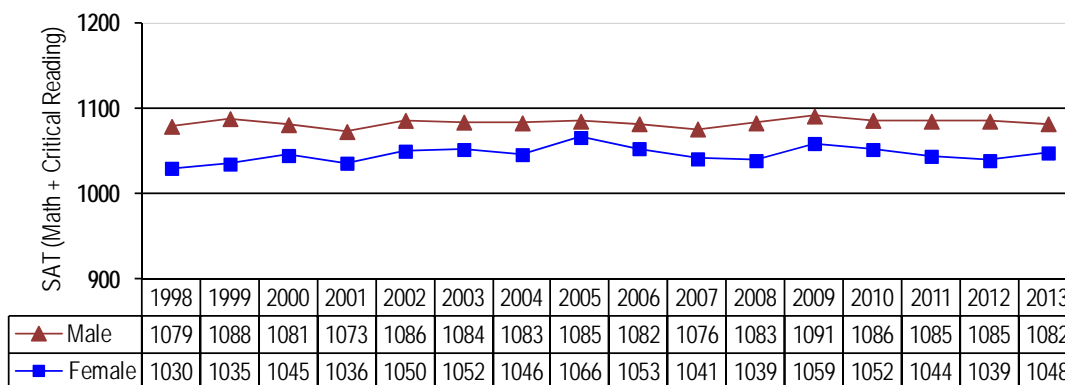
- Notes:
1. The NC and USA participation rates include private and public schools. WCPSS participation rate is the percentage of graduating students who took the SAT (revised November, 2014, see Table 1).
 2. For display purposes, Y-axis is truncated.
 3. Data Source: DPI 2013 SAT report (Districts and Schools Listings).

In 2011-12, the NC Department of Public Instruction began administering the ACT assessment to 11th grade students. The ACT, which is now 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. The drop seen in SAT participation rates in recent years is likely related to this, as students applying to UNC system colleges may submit either SAT or ACT results to be considered for admission.

Results by Subgroup

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 4). However, the gender gap has narrowed from 49 to 34 points since 1998, and more noteworthy, female students have increased their total score by 18 points while male students added three points during the same time frame.

Figure 4
WCPSS SAT Totals by Gender, 1998-2013



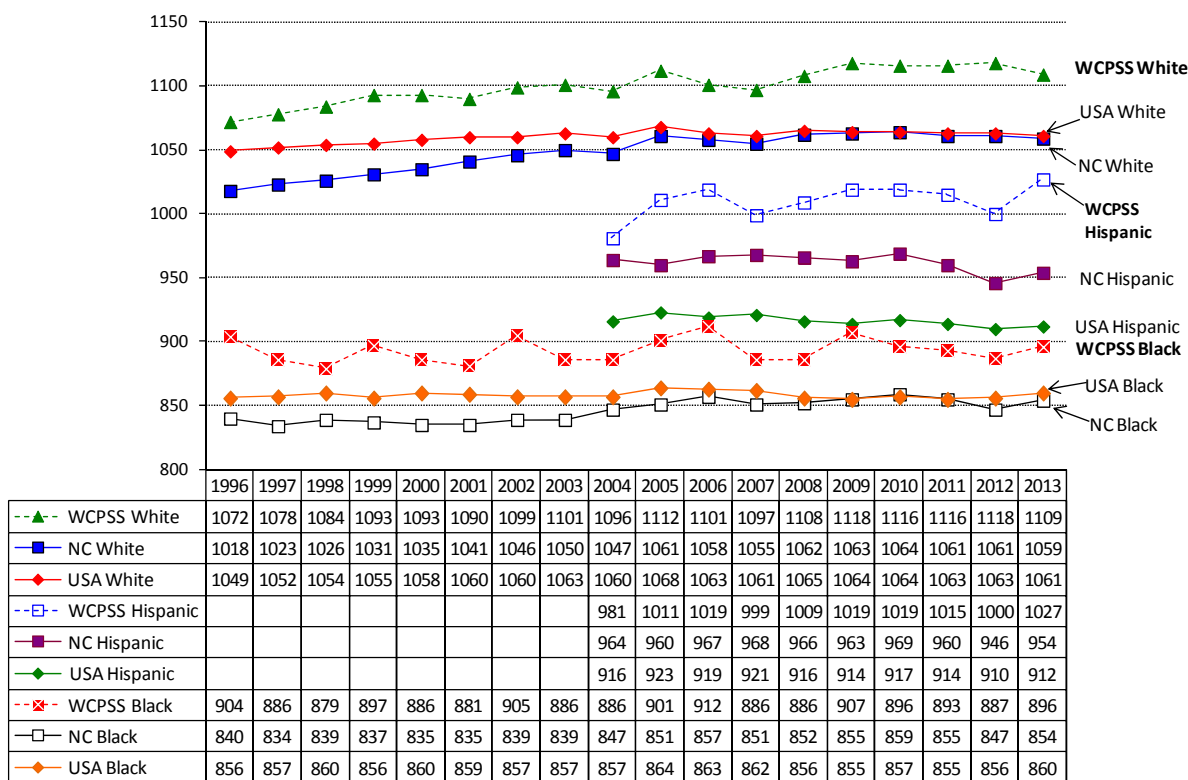
- Notes: 1. Writing is not included.
 2. For display purposes, Y-axis is truncated.
 3. Data source: 2013 College Board Seniors, SAT Data by Gender.

In recent years, more female students have taken the SAT than have male students, 3,258 female and 2,987 male in 2012-13. In addition, in 2012-13, female students outscored male students in Writing (515 and 501, respectively).

Figure 5 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 2012-13 continued to outperform their state and national counterparts. Since 2004, WCPSS White students have had an increase of 13 points, while North Carolina and USA White students’ scores increased by 12 points and 1 point, respectively. WCPSS Hispanic/Latino students’ gains have continued an upward trend, gaining 27 points between 2011-12 and 2012-13. Black/African-American students in WCPSS, NC, and the nation saw

moderate increases in 2012-13. Comparisons should be made with caution due to small numbers in some of the groups.

Figure 5
WCPSS, NC, and USA SAT Scores by Ethnicity, 1996-2013



- Notes: 1. Writing is not included.
- 2. For display only, Y-axis is truncated.
- 3. Since some students choose not to report their racial/ethnic group to the College Board when they register to take the SAT, results should be viewed with caution.
- 4. Data source: 2013 College Board District Highlights Report.
- 5. Only the three large student groups are shown (American Indian, Asian, Pacific Islander/Hawaiian, and Multiracial are not shown).

Results for Large NC Districts

Table 2 compares two years of WCPSS SAT outcomes with those of comparable large school districts across the state. In 2012-13, WCPSS had the highest total scores and participation rates, and also outperformed other large school districts in Math, Critical Reading, and Writing. WCPSS and the comparison large school districts all experienced a dip in SAT participation in 2012-13.

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

LEA	2013					2012				
	Math	Critical Reading	Writing	Math, Critical Reading & Writing	Part. Rate	Math	Critical Reading	Writing	Math, Critical Reading & Writing	Part. Rate
Wake	541	523	508	1572	67.0	543	520	502	1565	76.0
Forsyth	505	495	478	1478	56.7	511	495	473	1479	63.8
Charlotte-Mecklenburg	503	493	477	1473	59.7	503	487	473	1463	67.5
Guilford	488	481	464	1433	67.6	488	476	460	1424	73.2
Durham	484	481	461	1426	64.5	477	474	448	1399	72.5
Cumberland	461	464	442	1367	53.7	473	467	443	1383	56.2

Data Source: DPI 2013 SAT report (Districts and Schools Listings). WCPSS rates reflect percentages of actual graduating seniors (see notes under Table 1)

Summary

As the ACT has become part of the state's mandatory testing program, SAT participation in WCPSS and NC has declined in recent years. However, 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. Continued improvements in college entrance exam scores 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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- Deng, H., & Kobrin, J. L. (2007). *The impact of course-taking performance on SAT items with higher level mathematics content*. Retrieved from <http://research.collegeboard.org/sites/default/files/publications/2012/7/researchreport-2006-8-impact-higher-level-math-course-taking-sat.pdf>