

E&R Report No. 04.28

October 2004

WCPSS OUTCOMES SUMMARY FOR 2003-04, WITH AN EMPHASIS ON ACHIEVEMENT GAP STATUS

Contacts: Nancy Baenen, Kimberly Yaman, Chuck Dulaney

Abstract

The Wake County Public School System (WCPSS) has seen positive changes in patterns of achievement and dropout rates over the past several years overall and by subgroup. The most positive one-year subgroup changes related to dropout rates for Black students and Adequate Yearly Progress (AYP) for minority, low-income, and limited English proficient (LEP) students. However, many achievement gaps remain, and the system continues to work towards optimal achievement for all students and closing achievement gaps. Each of the sections that follow cites key findings from reports either already produced by the Evaluation and Research Department (E&R) or preliminary data from reports in progress.

End-of-Grade Test Results for the 2003-04 School Year:

(From E&R Report #04.22, published August 2004. See Figures 1-4.)

- The percentage of students scoring in Level III or IV was slightly higher in math (92%) than in reading (90%). (See Figure 1.)
- WCPSS students in grades 3-8 continued to show high performance, with the percentage of students' reading and math test results showing Level III or Level IV scores remaining steady at 91% in 2004.
- The percentage of students scoring in Level IV also remained stable, at 60%.
- More than 85% of students met or exceeded grade-level standards in both reading and math at all tested grade levels in 2003. (See Figure 2.)
- Overall, the percentage of White students, Black students, and Asian students meeting or exceeding grade-level standards in reading and math either remained the same or improved slightly over the previous year. However, the percentage of Hispanic/Latino students at or above grade level declined by about two percentage points in both subjects. (See Figures 3 and 4.)
- The gap in achievement on EOG exams by racial subgroups stayed the same between 2002-03 and 2003-04. More than 96% of White and Asian students in grades 3-8 scored at Level III or IV on both reading and math exams. The gap between these groups and Black and

Hispanic/Latino students was larger in reading (about 18 percentage points for Black students and 20 percentage points for Hispanic/Latino students) than in math (about 16 points for Black students and 12 points for Hispanic/Latino students).

- The gap in achievement between students who receive free or reduced-price lunch (FRL) and those who do not receive FRL stayed about the same in both reading and math.

Figure 1
Percent of All Grade 3-8 Reading and Math EOG Scores
by Achievement Level 2003-04

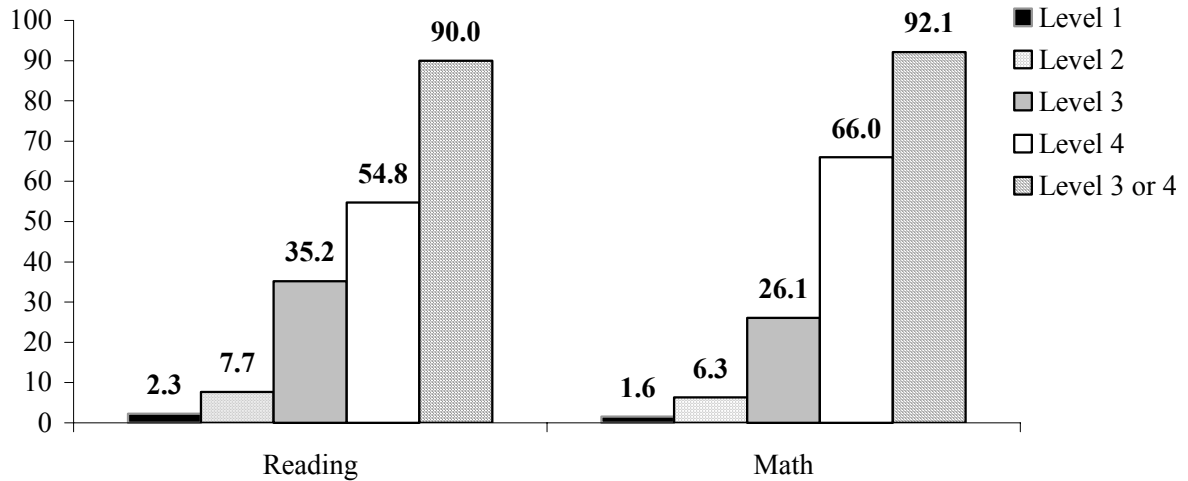


Figure 2
Composite Percentages of All EOG Scores at/above Grade Level
Reading and Math over Time

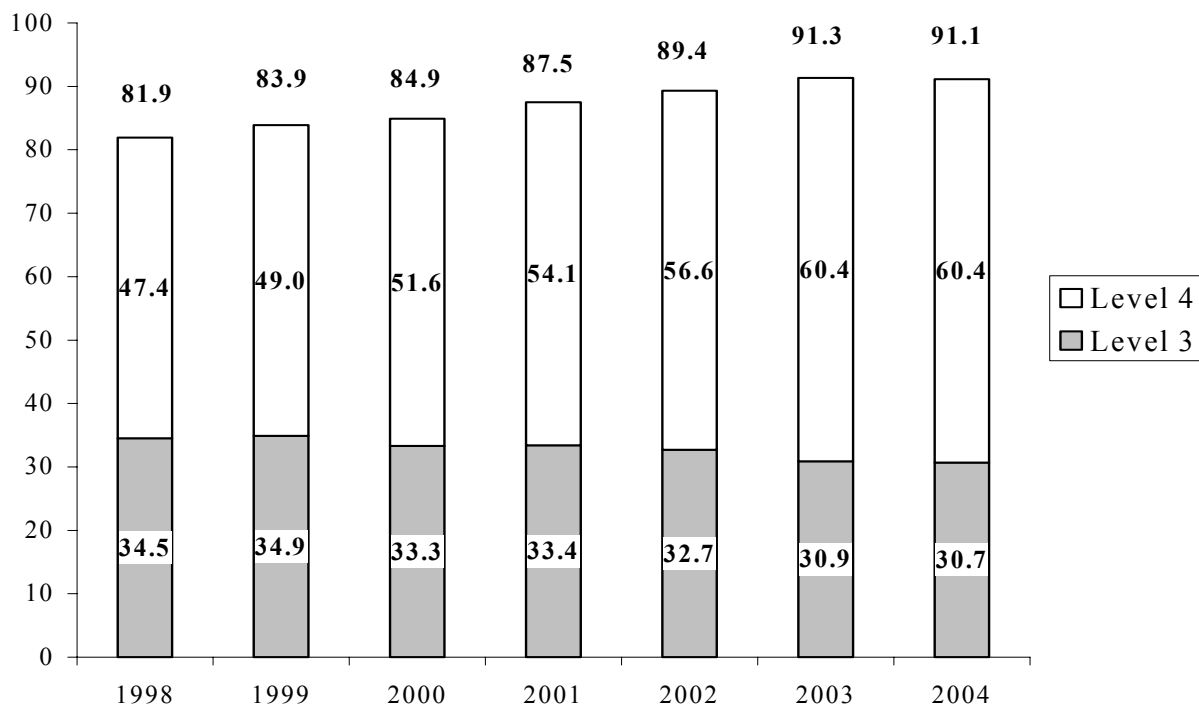


Figure 3
Percent of All Grade 3-8 Students at/above Grade Level
in Reading by Race and Ethnicity over Time

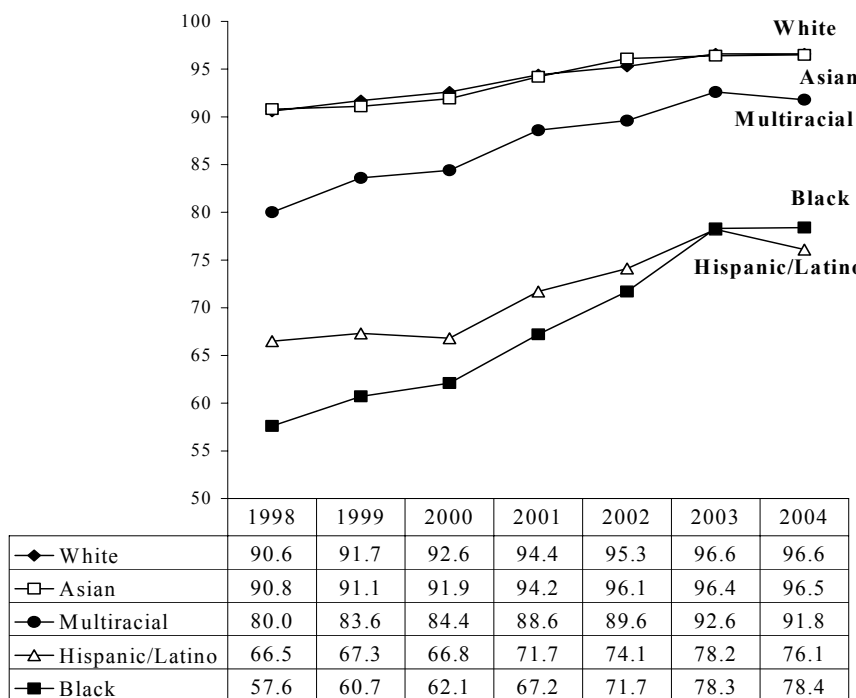
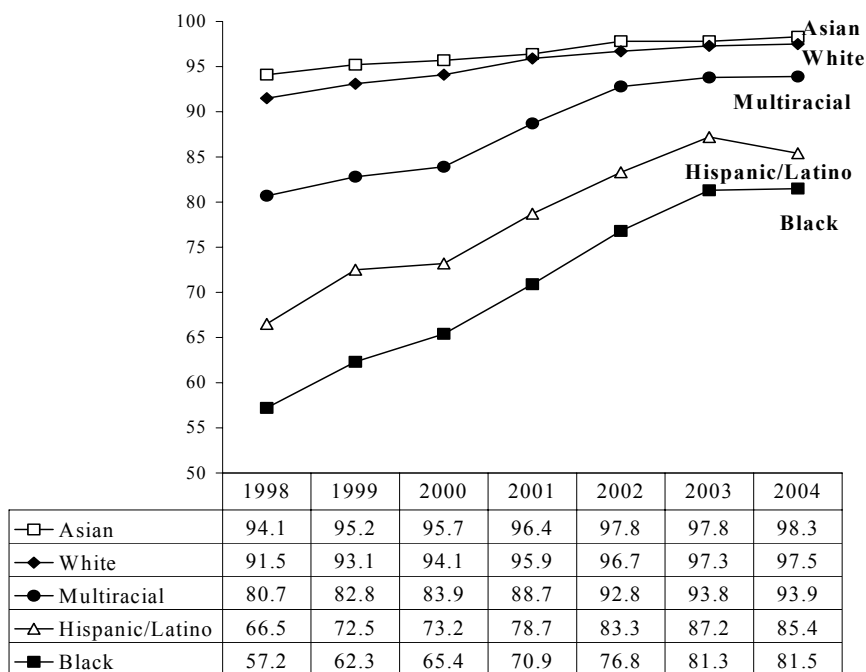


Figure 4
Percent of All Grade 3-8 Students at/above Grade Level
in Math by Race and Ethnicity over Time



End-of-Course Test Results for the 2003-04 School Year:

(From E&R Report #04.23, published August 2004. See Figures 5-10.)

- Mean scale scores rose in five of eight subject areas.
- More than 85% of students scored at Level III or IV in five subjects: Algebra I, Algebra II, English I, chemistry, and physics.
- Mean scale scores surpassed the cut-off point for Achievement Level IV in four subjects: Algebra I (67.1), Algebra II (69.7), chemistry (65.0), and physics (63.9).
- Physical science showed the largest improvement from the previous year, rising more than four percentage points. The lowest percentage of students at Level III or IV was in physical sciences (65.8%).
- Test results disaggregated by race and ethnicity showed that the achievement gap between student subgroups ranged from a low of 8.1 percentage points in physics to a high of 41.7 points in biology.
- Black students had the lowest proficiency percentages and mean scale scores among all racial and ethnic groups in seven of the eight test subjects (they performed better than Hispanic/Latino students on English I).
- Algebra I percentages show a steady pattern of improvement for all racial groups over the past six years, with the exception of Asian students, whose proficiency declined in 2003-04. Overall growth in achievement was highest for Black students (a 22.9 percentage point increase from 1998-99 to 2003-04), followed by White students (+18.2), Hispanic/Latino

students (+15.0), and Asian students (+7.1). Data on students classified as “multiracial” was not available prior to 2001-02.

- English I percentages declined modestly for all racial and ethnic groups in 2003-04, after rising substantially the previous year. Notwithstanding this year’s test results, the trend over the past six years has generally been positive for most groups. The cumulative gain in the percentage of students scoring at Level III or IV since 1998-99 was largest for Black students (+26.3 percentage points), followed by Hispanic/Latino students (+15.6), Asian students (+15.1), and White students (+11.0).
- Biology proficiency percentages rose in 2003-04 for Black students, Hispanic/Latino students, and Multiracial students, and fell slightly for White and Asian students. This one-year trend closed achievement gaps slightly but does not reflect the long-term trend. In contrast to Algebra I and English I, the achievement gap between Black and Hispanic/Latino students on the one hand and White and Asian students on the other has not narrowed substantially over the past six years. Asian students have shown the largest gain in proficiency over this time (a 13.7 percentage point increase).

Figure 5
EOC Mean Scale Scores for WCPSS, 1998-99 to 2003-04

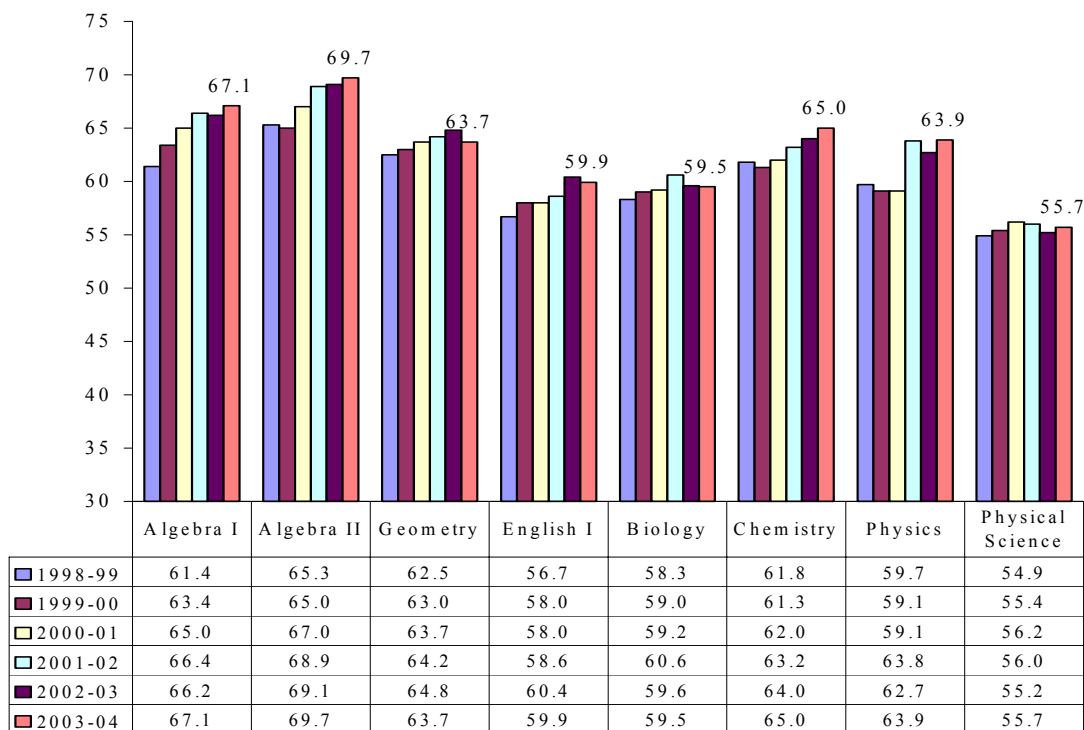


Figure 6
Percentage of WCPSS Students at Levels III or IV on EOC Tests

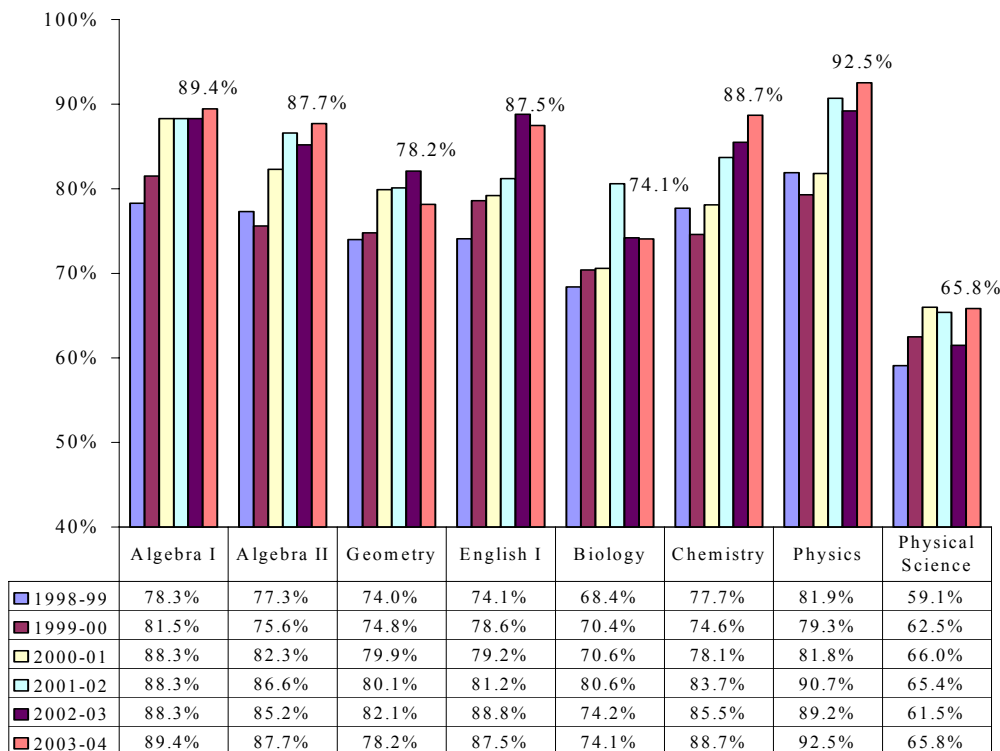


Figure 7
Percentage of WCPSS Students at Levels III or IV on English I EOC Tests by Race, 1998-99 to 2003-04

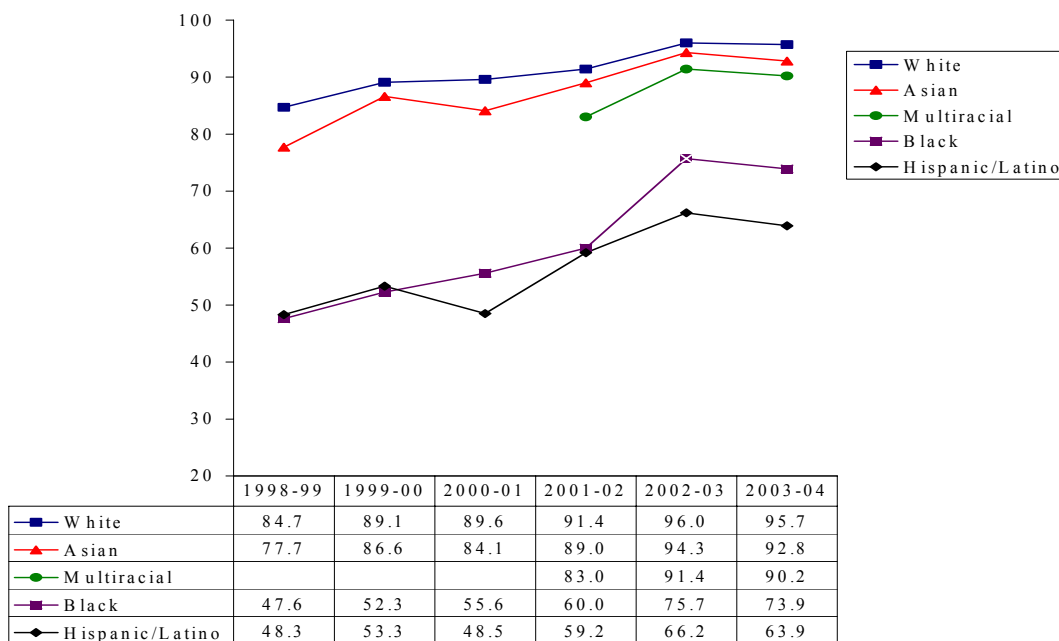


Figure 8
Percentage of WCPSS Students at Levels III or IV on Algebra I EOC Test
by Race, 1998-99 to 2003-04

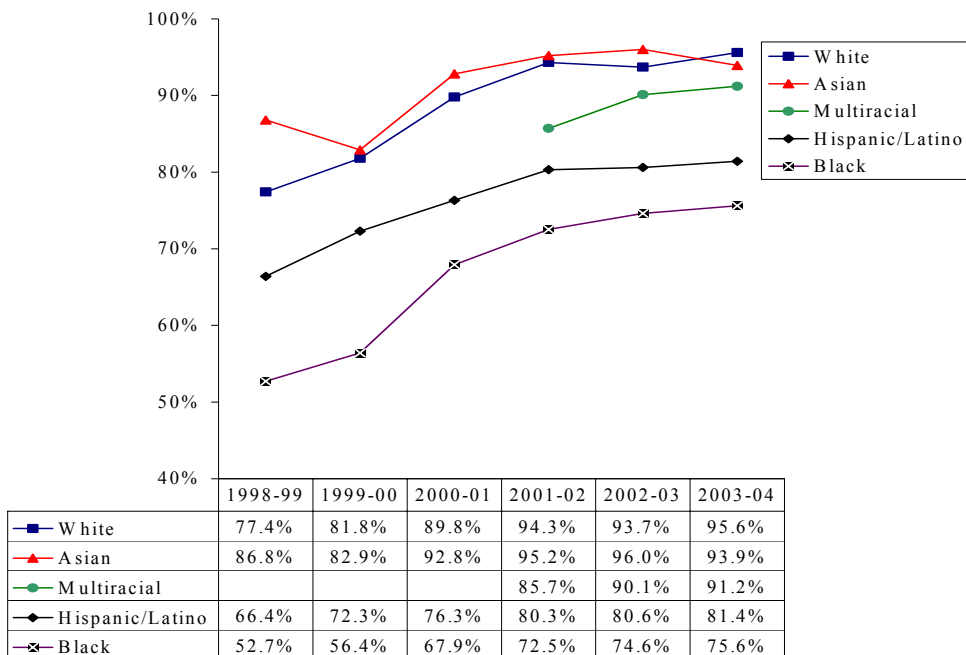


Figure 9
Percentage of WCPSS Students at Level III or IV on Biology EOC Tests by Race,
1998-99 to 2003-04

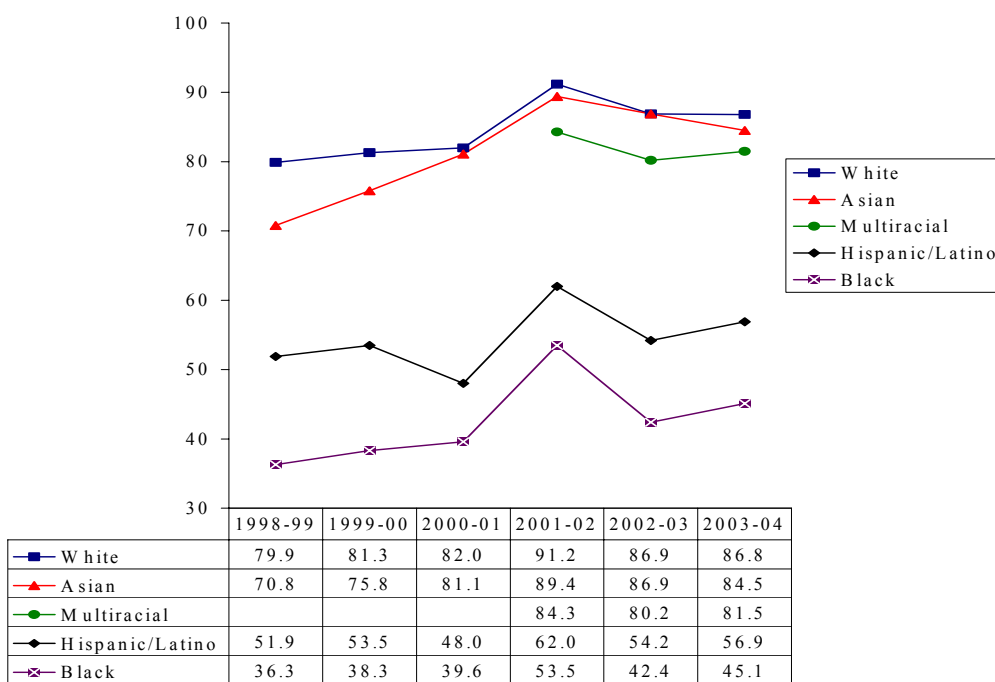


Figure 10
Percentage of WCPSS Students at Level III or IV in EOCs for Selected Subgroups,
2003-04

	Algebra I	Algebra II	Geometry	English 1	Biology	Chemistry	Physics	Physical Science
All Students	89.4%	87.7%	78.2%	87.5%	74.1%	88.7%	92.5%	65.8%
Male	89.1%	88.7%	81.2%	85.0%	75.5%	90.2%	94.8%	70.5%
Female	89.8%	86.7%	75.3%	90.0%	72.8%	87.3%	89.1%	60.5%
White	95.6%	91.5%	86.7%	95.7%	86.8%	91.4%	93.8%	83.5%
Black	75.6%	72.4%	51.3%	73.9%	45.1%	74.4%	85.7%	46.6%
Asian	93.9%	93.6%	91.5%	92.8%	84.5%	92.0%	89.9%	76.6%
Hispanic/Latino	81.4%	80.1%	63.8%	63.9%	56.9%	78.4%	88.0%	52.9%
Multiracial	91.2%	88.1%	72.1%	90.2%	81.5%	86.4%	86.7%	69.4%
Am. Indian	91.4%	71.4%	80.0%	93.1%	77.8%	100.0%	100.0%	77.8%
SWD	76.3%	77.5%	65.3%	62.8%	46.7%	78.5%	84.0%	52.4%
Not SWD	91.2%	88.3%	79.3%	91.4%	77.7%	89.1%	92.7%	69.2%
AG	99.7%	98.9%	98.7%	100.0%	98.7%	98.1%	98.7%	98.6%
LEP	71.8%	78.0%	61.4%	40.7%	39.1%	87.0%	84.0%	43.3%
Not LEP	90.0%	87.9%	78.4%	89.4%	75.3%	88.7%	92.7%	66.7%
FRL	75.6%	76.9%	55.6%	67.8%	45.7%	75.2%	80.7%	47.8%
Not FRL	92.1%	88.6%	80.9%	92.2%	79.1%	89.6%	93.1%	70.9%

SWD = Students with Disabilities AG = Academically Gifted LEP = Limited English Proficient FRL = Free or Reduced-Price Lunch

SAT Results for the 2003-04 School Year:

(From an E&R report currently in progress. See Figure 11.)

- The average total SAT score for WCPSS seniors in 2003-04 was 1063, a slight decline from 2002-03, when the total SAT scores for WCPSS seniors was 1067.
- The average SAT scores for WCPSS remain substantially higher than both the state average (1006) and the national average (1026).
- WCPSS scores in both subjects were the highest of the six comparable North Carolina school districts (WCPSS, Charlotte-Mecklenburg, Cumberland, Durham, Guilford, and Winston-Salem/Forsyth).
- Participation of the 2004 WCPSS senior class declined two percentage points from the previous year, with 77% of graduating seniors participating, but remained far above both state (70%) and national (48%) participation rates.
- In past years, there were large differences in average SAT scores among racial and ethnic groups. Subgroup comparisons of 2003 to 2004 are not yet complete.

Figure 11
WCPSS, NC, and USA Average Total SAT Scores over Time

Year	WCPSS				NC				USA			
	Total	Math	Verbal	Rate	Total	Math	Verbal	Rate	Total	Math	Verbal	Rate
1990	999	498	501	73	948	470	478	55	1001	501	500	40
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

NOTE: The participation rate is the percentage of graduating seniors who took the SAT I.

Advanced Placement Test Results for the 2003-04 School Year:

(From an E&R report currently in progress. See Figure 12.)

- Students at 16 WCPSS high schools took approximately 5,534 Advanced Placement (AP) exams offered by the College Board in 2003-04.
- The percentage of exams scored at 3 or higher on a 5-point scale (the score typically needed to qualify for college course credit) was 78.6%.
- WCPSS's overall success rate was 21.7 percentage points higher than the rate for North Carolina as a whole.
- On the five most frequently taken AP exams, the percent of scores that were 3 or higher rose an average of 4.9 points from the previous year.
- Performance gaps are largest between Black and White participants, closing slightly since 1997.

Figure 12
Participation and Performance on AP Exams by Racial Subgroups over Time

Race		1997	1998	1999	2000	2001	2002	2003	2004
Not Stated	Number of Exams	102	123	130	42	50	111	58	75
	Percent at 3 or Higher	87.3%	86.2%	80.0%	66.7%	68.0%	79.3%	72.4%	76.0%
Am. Indian	Number of Exams	4	8	6	22	13	13	16	20
	Percent at 3 or Higher	100.0%	50.0%	83.3%	72.7%	84.6%	69.2%	68.8%	65.0%
Black	Number of Exams	88	87	103	130	145	177	191	195
	Percent at 3 or Higher	54.5%	59.5%	56.3%	60.8%	54.5%	60.5%	61.3%	56.4%
Hispanic/Latino	Number of Exams	48	52	63	80	97	107	106	136
	Percent at 3 or Higher	70.8%	88.5%	87.3%	75.0%	79.4%	82.2%	81.1%	75.7%
Asian	Number of Exams	327	314	392	477	494	561	717	748
	Percent at 3 or Higher	83.2%	81.8%	78.3%	79.7%	79.6%	81.8%	75.7%	76.6%
White	Number of Exams	2159	2526	2656	2932	3401	3774	4254	4216
	Percent at 3 or Higher	80.9%	80.2%	77.8%	78.5%	77.6%	81.2%	81.0%	80.1%
Other	Number of Exams	57	87	121	123	120	135	126	144
	Percent at 3 or Higher	80.7%	73.6%	86.7%	87.0%	84.2%	83.0%	79.4%	81.3%

Dropout Results for the 2002-03 School Year:

(From an E&R report currently in progress. See Figures 13-15.)

- The WCPSS high school (grades 9-12) dropout rate continued to decline to a seven-year low of 2.6% in 2002-03. When compared to the largest public school systems in North Carolina, WCPSS had the lowest high school dropout rate, followed by Guilford (3.0%), Mecklenburg (4.0%), Forsyth (5.3%), and Durham (5.8%).
- This is the lowest dropout rate since the district began reporting dropouts, using federal standards, in 1992.
- At the high school level (grades 9-12), White (2.0%) students' dropout rates declined for the third year in a row. Black (3.3%) and Latino (6.4%) students' rates showed one-year declines. However, Asian (2.4%) and Multi-racial (4.6%) students' rates increased over the previous year's rates. The dropout rate for Native American students has been blanked out because the number of dropouts was fewer than 5.
- The most dropouts from high schools occurred in grade 9. Students in 10th grade composed 191 of the high school dropouts; 150 were in 11th grade; and 154 were 12th graders. Almost as many students dropped out of the 9th grade as did from the 11th and 12th grades combined. More than a fifth of the dropouts were 18 years of age or older at the time of dropping out.
- Approximately 75% of the high school dropouts were not in special programs of any kind. However, 10% were Learning Disabled, and 4.3% were Academically Gifted. Twenty-seven percent of the high school dropout cohort was receiving free or reduced-price lunch.
- The dropout rate for grades 7-12 also continued to decline, to 1.8%. Statewide dropout rates for grades 7-12 were at 3.2% for the same time period.
- The greatest improvement in dropout rates at grades 7-12 was evident for Black students, with their dropout rate decreasing from 4.0% to 2.2%. The rate for other groups improved slightly, declining from 1.5% to 1.3% for White students and 3.1% to 3.0% for other students.

Figure 13
WCPSS Dropout Rates for Grades 9-12 by Ethnic Group from 1999-2000 to 2002-03

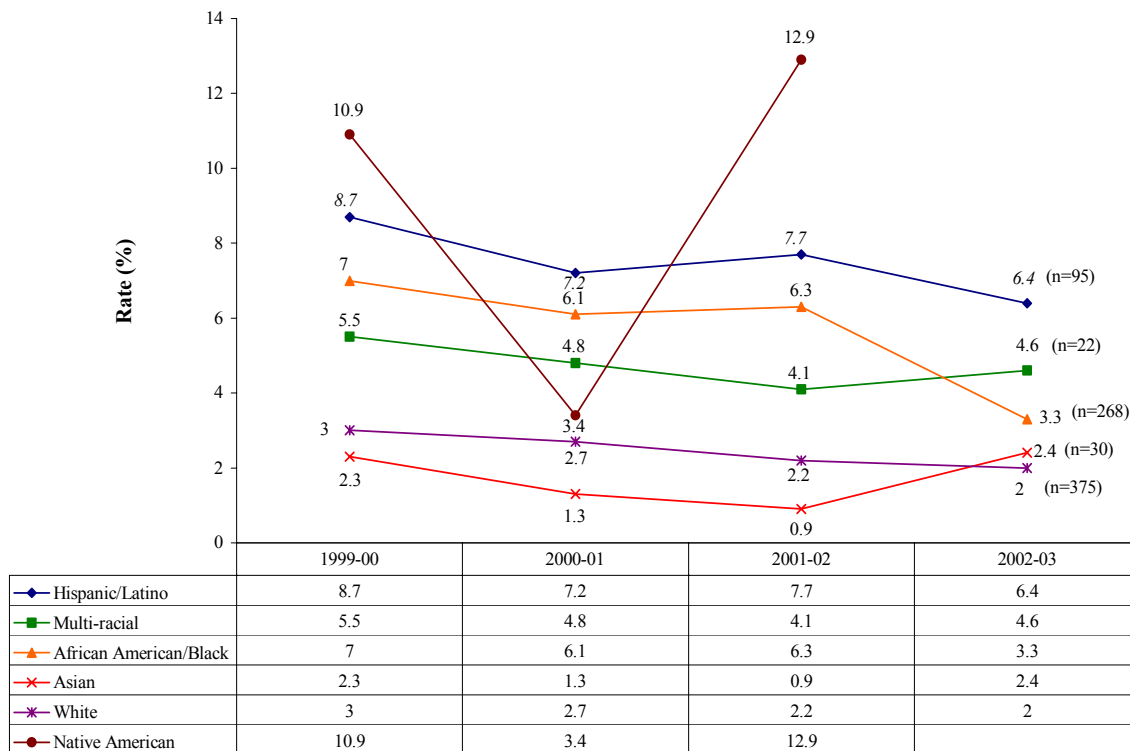


Figure 14
North Carolina and WCPSS Dropout Rate for Grades 7-12 from 1991-92 to 2002-03

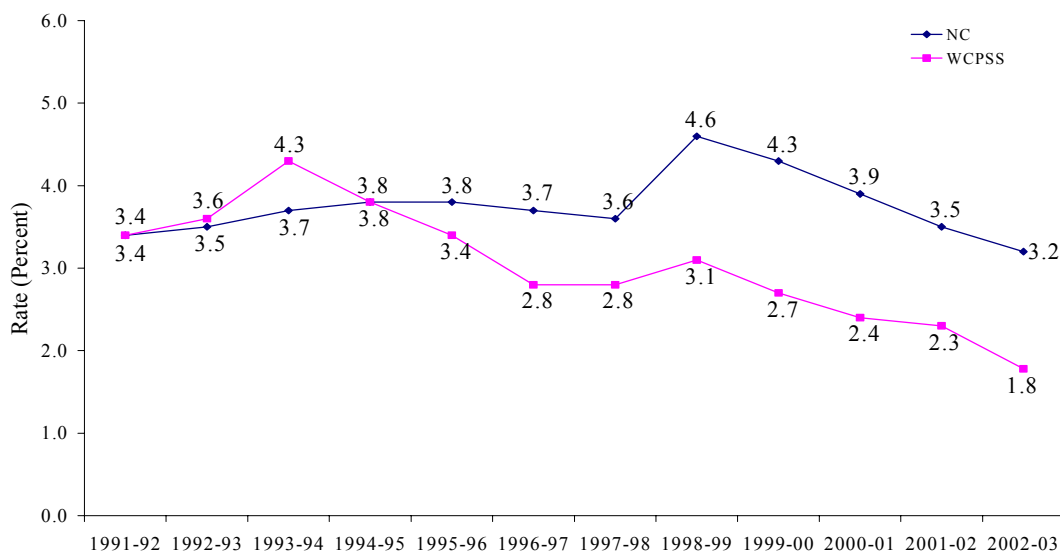
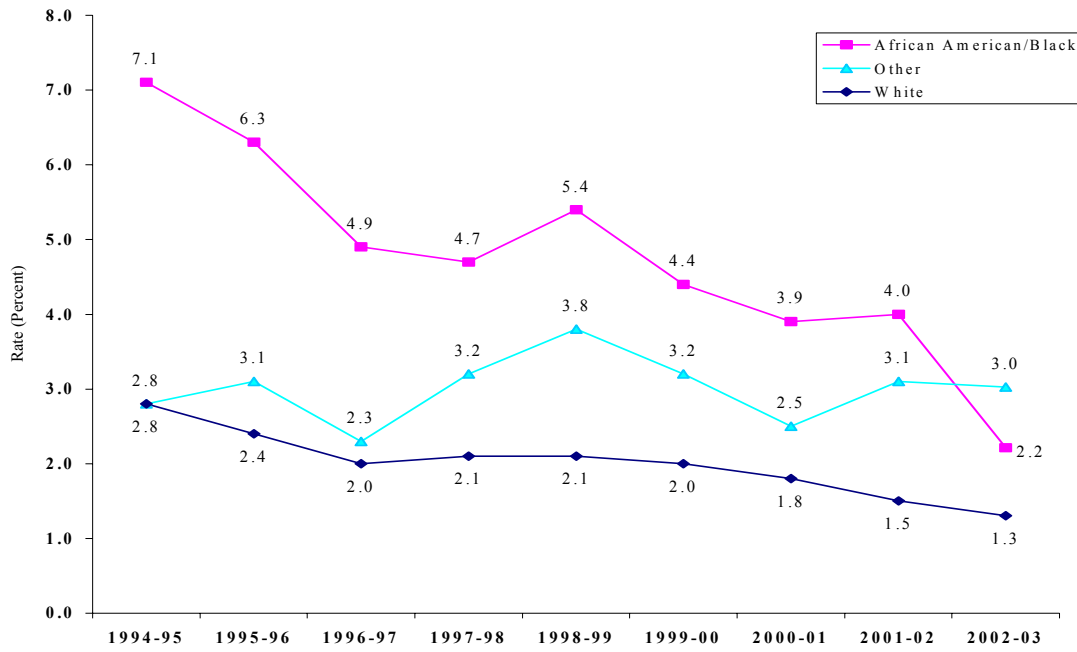


Figure 15
WCPSS Dropout Rates for Grades 7-12 by Ethnic Group from 1994-95 to 2002-03



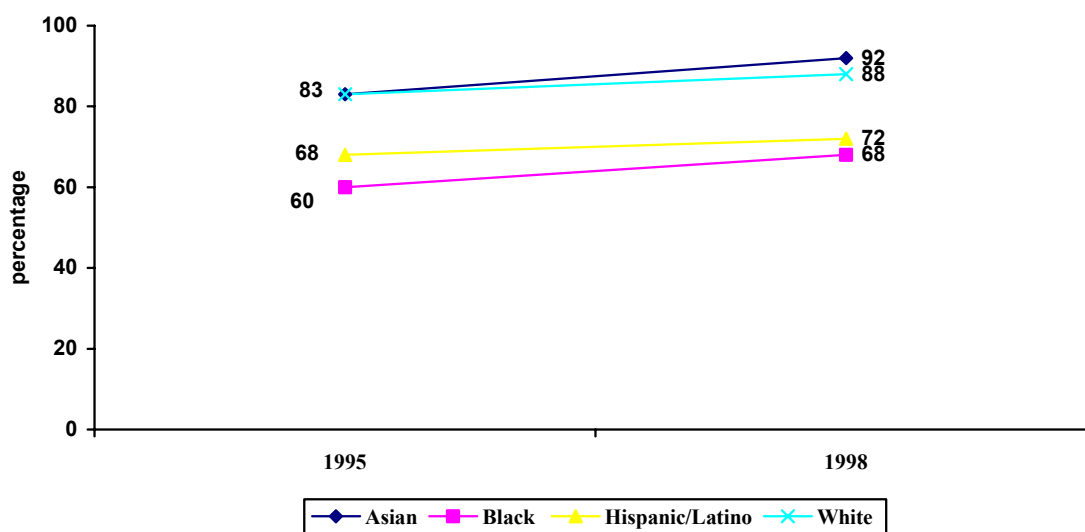
NOTE: Beginning in 1998-99, students transferring to community college GED programs were counted as dropouts.

Graduation Rate Study of the 1998-99 9th-Grade Cohort:

(From E&R Report #04.08, currently in progress. See Figure 16.)

- A study of 6,037 WCPSS students who were in ninth-grade for the first time in 1998 found their overall subsequent rate of graduation from high school was 83%.
- The 1998 graduation cohort rate is six percentage points higher than a comparable 1995 rate.
- Female students (87%) were more likely to graduate than male students (79%).
- Asian (92%) and White (88%) students were more likely to graduate than Black (68%) and Hispanic/Latino students (72%).
- All racial subgroups improved from between four to nine percentage points. Asian students made the greatest gains in graduation rates (nine percentage points), followed by Black students (eight percentage points), White students (five percentage points), and Hispanic/Latino students (four percentage points).

Figure 16
Graduation Rates Comparing the 1995 Cohort to the 1998 Cohort by Ethnic Group



NCLB – AYP Results for the 2003-04 School Year:

(From an E&R report currently in progress. See Figure 17.)

- In the second year of implementation of the federal No Child Left Behind (NCLB) legislation in North Carolina, WCPSS met 68 out of 73 district targets (93.2%) for the 2003-04 school year.
- 92 of 126 schools (73.0%) met AYP, an increase of nearly 30 percentage points over the previous year (43.1%). The increase reflects gains by students over the past year, as well as new guidelines applied to calculating AYP.
- Of the 34 schools that did not make AYP in 2003-04, 27 met all but one or two of their targets, and only seven schools missed three or more of their targets.

- 40% of middle schools met their AYP targets (up from 4% in 2002-03).
- 44% of high schools met their AYP targets (up from 6% in 2002-03).
- The number of cases in which schools missed their AYP targets for minority, LEP, and FRL students declined considerably between 2003 and 2004. For students with disabilities, this was true in math but not reading.

Figure 17
Number of Schools Missing AYP Proficiency Targets by Subgroup
(Difference reflects test gains *and* new guidelines for calculating AYP in 2003-04)

Subgroup	Reading		Math	
	2002-03	2003-04	2002-03	2003-04
SWD	18	18	38	17
FRL	33	6	32	8
LEP	7	3	7	2
Black	16	2	22	4
Hispanic/Latino	9	2	7	0

SWD = Students with disabilities FRL = Free or Reduced-Price Lunch LEP = Limited English Proficiency

•

ABCs Accountability Results for the 2003-04 School Year:

(From E&R Report #04.21, published August 2004. See Figures 18-25.)

Gaps in EOG and EOC performance are shared in previous sections. The ABCs of Public Education also provides an opportunity to examine growth by subgroup, which is highlighted here. High growth can help decrease achievement gaps.

- For the first time, more than half (64) of all WCPSS schools were designated as Honor School of Excellence or School of Excellence, and another 35 were designated as School of Distinction.
- 79% of WCPSS schools received one of these distinctions for 2003-04, surpassing the statewide rate of 56%.
- High growth was achieved by 46% of WCPSS schools, compared to 35% of schools statewide. This was a decline for both the district and the state from 2003, when the percentages were 75% and 72%, respectively.
- Expected growth was achieved by 38% of WPCSS schools and 40% of schools statewide.
- Districtwide, the Performance Composite rose to 92.1% for grades 3-5, 88.9% for grades 6-8, and 82.8% for grades 9-12.
- No WCPSS school was low-performing in 2003-04.
- For grades 3-5, WCPSS met expected growth for all subgroups except Native American students. High growth was not achieved for seven of 17 subgroups. Trends were less positive by subgroup than in 2002-03, with high growth achieved for all but one subgroup (Level IV).

- For grades 6-8, the percentage of schools meeting expected or high growth may be higher than indicated in this report, if the State Board of Education approves recalculating growth for grade 6 students without the flawed reading component. Comparisons are therefore premature.
- For grades 9-12, all subgroups met expected growth targets and all but Level III and Native American students met high growth targets. These trends were more positive than in 2002-03, when all subgroups met expected growth but five subgroups did not show high growth (Level III, not disabled, female, Native American and multiracial).

Figure 18
WCPSS ABCs Growth Results Summary, 1997-2004

		Number of Schools in ABCs Program	Schools Achieving High Growth	Schools Achieving Expected Growth	Schools Not Meeting Expected Growth
Elementary	1997	67	27 (40%)	22 (33%)	18 (27%)
	1998	69	60 (87%)	7 (10%)	2 (3%)
	1999	69	45 (65%)	18 (26%)	6 (9%)
	2000	74	60 (81%)	8 (11%)	6 (8%)
	2001	78	49 (63%)	23 (30%)	6 (8%)
	2002	78	44 (56%)	22 (28%)	12 (15%)
	2003	79	70 (89%)	9 (11%)	0 (0%)
	2004	80	41 (51%)	33 (41%)	6 (8%)
Middle	1997	20	11 (55%)	4 (20%)	5 (25%)
	1998	20	16 (80%)	3 (15%)	1 (5%)
	1999	20	18 (90%)	1 (5%)	1 (5%)
	2000	22	10 (45%)	7 (32%)	5 (23%)
	2001	24	11 (46%)	7 (29%)	6 (25%)
	2002	24	15 (63%)	7 (29%)	2 (8%)
	2003	25	9 (36%)	13 (52%)	3 (12%)
	2004	27	3 (11%)	10 (37%)	14 (52%)
High	1998	12	6 (50%)	5 (42%)	1 (8%)
	1999	13	13 (100%)	0 (0%)	0 (0%)
	2000	13	12 (92%)	1 (8%)	0 (0%)
	2001	15	8 (53%)	7 (47%)	0 (0%)
	2002	15	7 (47%)	8 (53%)	0 (0%)
	2003	16	9 (56%)	7 (44%)	0 (0%)
	2004	16	12 (75%)	4 (25%)	0 (0%)
Alternative	2000	3	2	1	0
	2001	3	1	2	0
	2002	3	1	0	2
	2003	3	1	2	0
	2004	2	2	0	0
Total WCPSS Schools	1997	87	38 (44%)	26 (30%)	23 (26%)
	1998	101	82 (81%)	15 (15%)	4 (4%)
	1999	102	76 (75%)	19 (19%)	7 (7%)
	2000	112	84 (75%)	20 (18%)	7 (6%)
	2001	120	69 (58%)	39 (32%)	12 (10%)
	2002	120	67 (56%)	37 (31%)	16 (13%)
	2003	123	89 (72%)	31 (25%)	3 (2%)
	2004	125	58 (46%)	47 (38%)	20 (16%)

Figure 19
ABCs Performance Results Summary, 2000-2004

	WCPSS					NC				
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
Number of Schools in ABCs Program	112	117	120	123	125	2,115	2,158	2,194	2,221	2,232
Schools of Progress (70%-79% in Level III/IV)	NA	NA	14 12%	4 3%	4 3%	NA	NA	NA	NA	NA
Schools of Distinction (80%-89% in Level III/IV)	55 49%	53 45%	37 31%	51 41%	35 28%	510 24%	640 30%	647 30%	886 40%	640 29%
Schools of Excellence (90% or more in Level III/IV)	9 8%	30 26%	52 43%	50 41%	64 51%	73 4%	171 8%	300 14%	473 21%	596 27%

Notes

- Schools of Progress was introduced as a recognition category in the 2001-02 school year.
- Beginning in 1998, the number of NC schools includes charter schools and alternative schools.
- Fourth- and seventh-grade writing scores for 2000 and 2001 are included but were removed from the ABCs performance composite for later years.

Figure 20
WCPSS
Expected Growth Composite by Group 2003-04
Reading and Math Grades 3-5

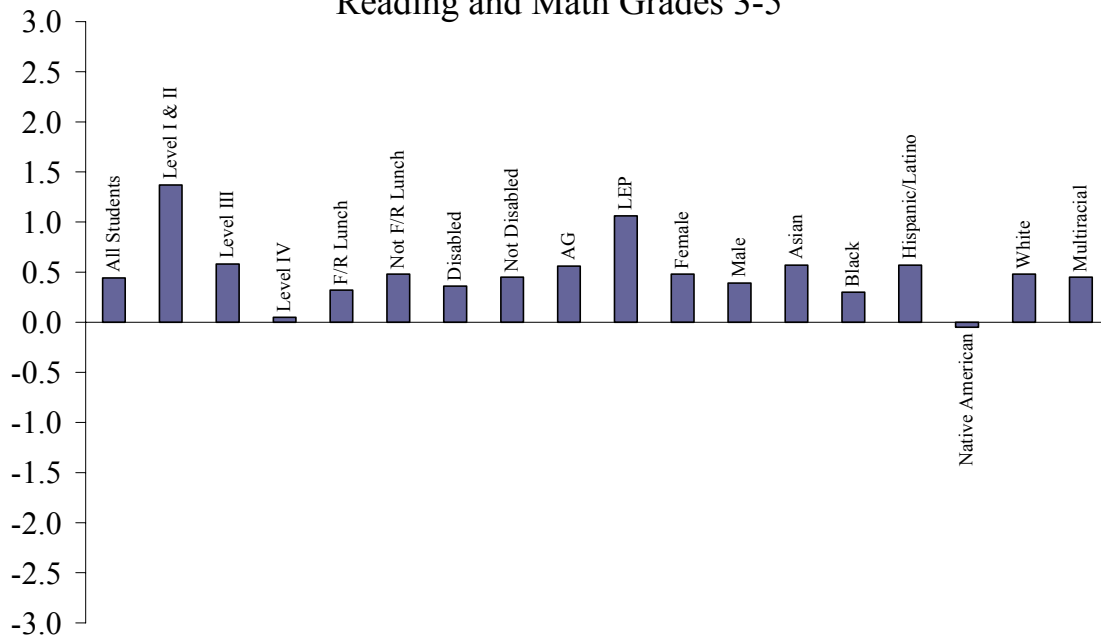


Figure 21
WCPSS
High Growth Composite by Group 2003-04
Reading and Math Grades 3-5

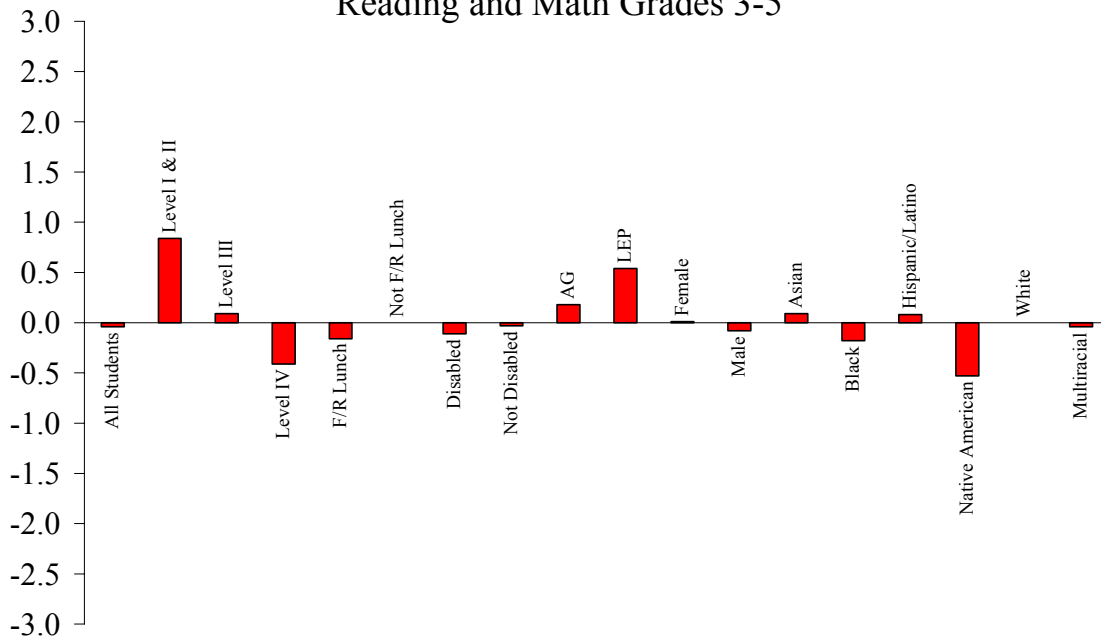


Figure 22
WCPSS
 Expected Growth Composite by Group 2003-04
 EOG Reading and Math Grades 6-8 and EOC Math

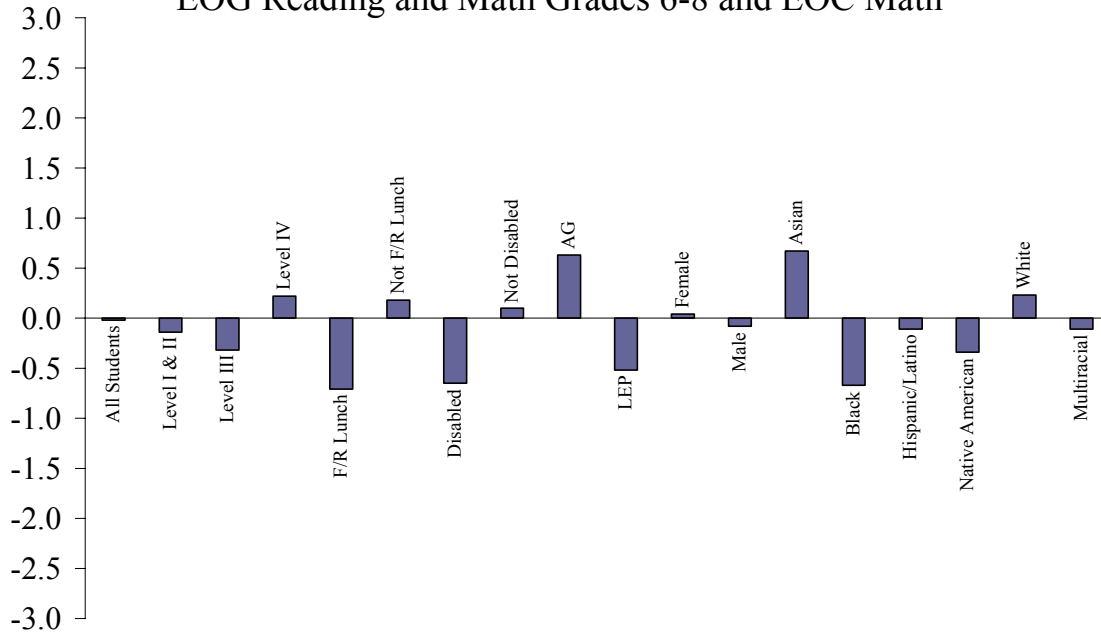


Figure 23
WCPSS
 High Growth Composite by Group 2003-04
 EOG Reading and Math Grades 6-8 and EOC Math

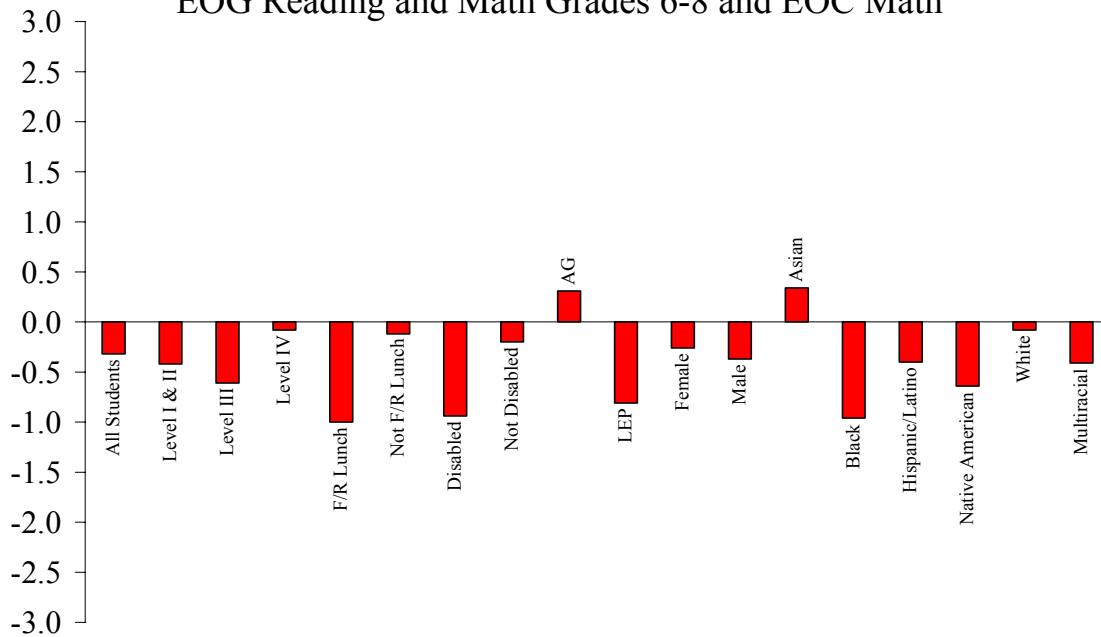


Figure 24
WCPSS High Schools
2003-04 ABC Expected Growth Composite by Group

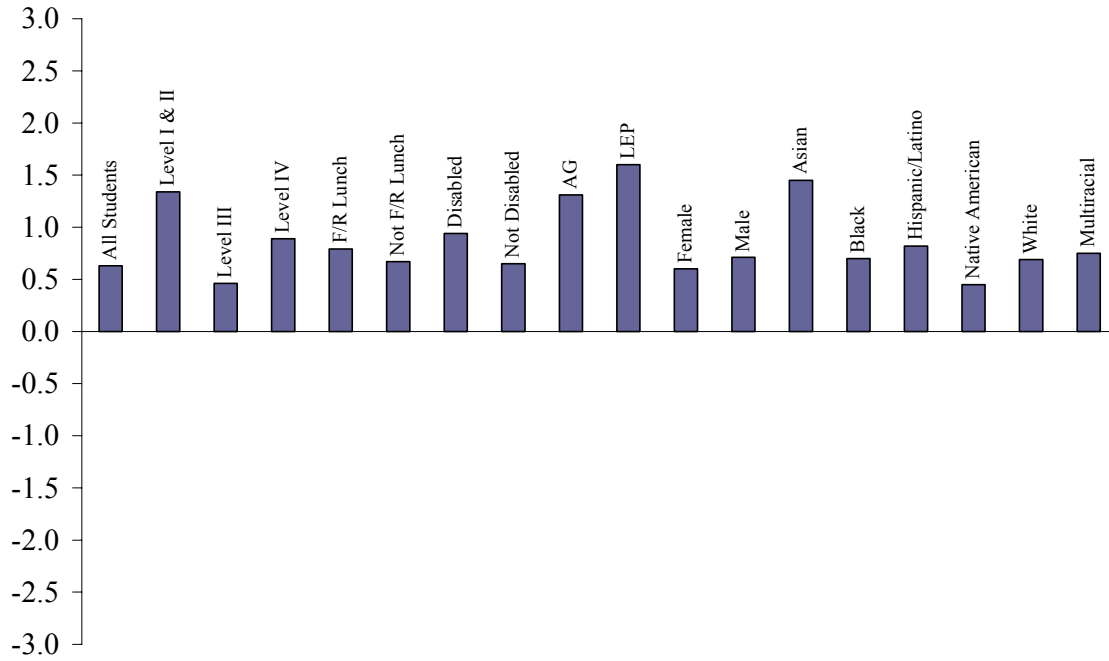
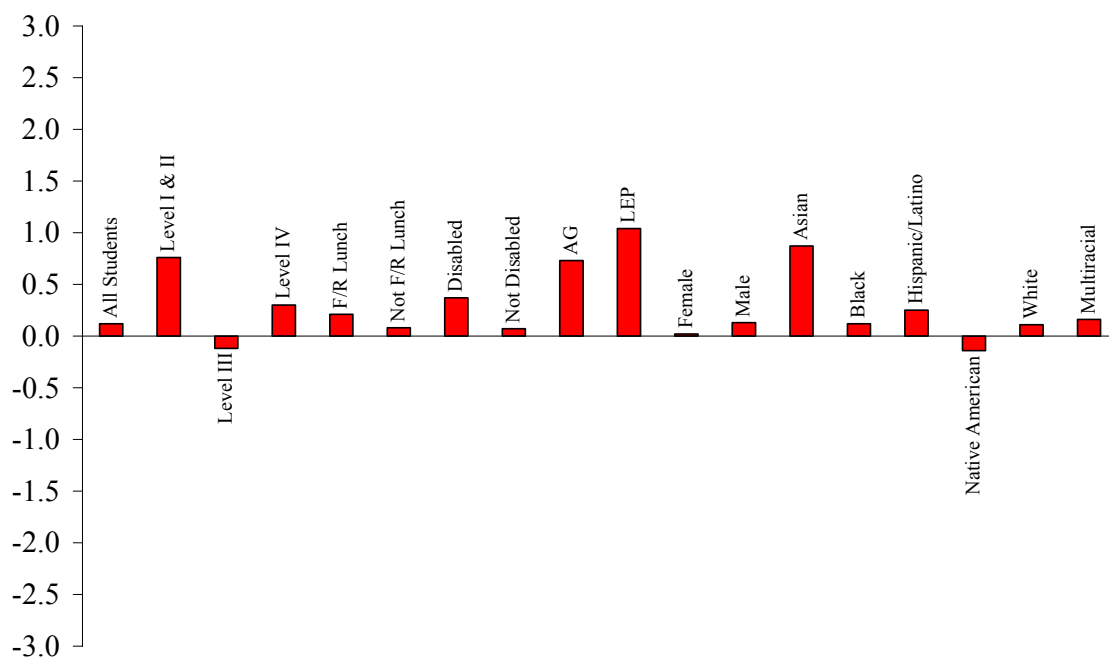


Figure 25
WCPSS High Schools
2003-04 ABC High Growth Composite by Group



REFERENCES

All WCPSS Evaluation and Research Department final reports can be accessed via the Internet at <http://www.wcpss.net/evaluation-research>. Preliminary reports will be posted to the Internet once they have been finalized.

Dulaney, C. (August 2004) North Carolina ABCs Results: 2003-04. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Dulaney, C. Preliminary WCPSS SAT Results 2004. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Haynie, G. Preliminary Report: Graduation Rates, Wake County Public School System: A Study of the 1998 9th-Grade Cohort. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Gilleland, K. Preliminary Results on Dropouts from Wake County Public Schools, 2002-03. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Regan, R., Haynie, G., & Dulaney, C. (August 2004) End-of-Course Multiple-Choice Test Results for 2003-04. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Regan, R., & Haynie, G. (August 2004) End-of-Grade Multiple-Choice Test Results for 2003-04. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.

Regan, R., & Dulaney, C. Preliminary Results on Advanced Placement Tests Given during the 2003-04 School Year. Raleigh, N.C.: Evaluation and Research Department, Wake County Public School System.