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WAKE COUNTY
PUBLIC SCHOOL SYSTEM

WCPSS HIGH SCHOOL STUDENT OUTCOMES 2005-06

Editors

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ABSTRACT

Looking across various indicators of performance, persistence, and academic rigor for WCPSS high school students, many indicators point toward the relative success of WCPSS high school students. Student achievement remains high compared to state and national results, and an increasing number of students are pursuing rigorous AP coursework in high school. In addition, the skills and abilities that WCPSS graduates obtain appear to serve them well in the UNC system, which is the most common post-high school educational destination for WCPSS graduates. However, significant challenges remain related to changing student populations and rising academic standards which are challenging the system's ability to sustain and increase academic performance for all students.

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EXECUTIVE SUMMARY

This report summarizes overall trends in student outcomes at grades 9-12 for 2005-06 and over time for the Wake County Public Schools (WCPSS). This includes not only a variety of testing results but accountability standards, promotion/retention rates, and graduation rates. Findings related to effective practices based on our research and evaluations are included in the final section, followed by a discussion of the overall results and issues to watch in the coming years.

BACKGROUND

Demographic Trends

The WCPSS student population has been growing rapidly, with an increase of 24% since 2001. WCPSS is growing more diverse, with an increase in the percentage of non-White, low income, and limited-English-proficient (LEP) students. Some of the groups that have been growing more rapidly have historically shown lower achievement and greater propensity to drop out of school, presenting challenges to the system's efforts at raising overall achievement.

Testing Outcomes

WCPSS high school students take a wide variety of national and state tests each year, including the SAT, Advanced Placement (AP) exams, state End-of-Course (EOC) tests, VoCATS tests in career/technical education courses, and a state Writing assessment at 10th grade. While performance on these tests remains high compared to virtually all external benchmarks, significant historical achievement gaps remain on each test as well.

National Tests

- SAT scores for WCPSS students have risen 67 points since 1990, and continue to outpace both the statewide and national averages.
- SAT participation rates in WCPSS remain higher than both the state and national rates, with 77% of graduating seniors in 2005-06 having taken the test.
- Participation in AP courses and AP exams have risen significantly in recent years among WCPSS students, with 38% of 11th and 12th participating in the AP program in 2005-06.
- Passing rates on AP exams in WCPSS have dipped in recent years, but remain above both the state and national passing rates, hovering between 75-80% since 1997-98.
- While SAT and AP exam performance remain higher than national and state figures, significant gaps remain on test scores as well as enrollment in AP courses between different ethnic groups and, in some cases, between male and female students.

State Tests

- Across the various EOC tests given to students in selected high school courses across the state, overall performance for WCPSS students increased slightly in 2005-06 after being relatively flat for the prior few years.

- Within specific courses, five of the eight EOC tests administered since 2002-03 showed a slight uptake in scores in 2005-06. Scores on the new U. S. History and Civics and Economics tests, however, yielded low proficiency rates relative to most other EOCs.
- While performance on the 10th grade Writing assessment continues to be higher that the state, proficiency rates have remained relatively stable since 2003-04, with just over 65% of students scoring proficient in 2005-06.
- Scores on VoCATS tests, which are given to students in career and technical education courses, have increased over the past several years. Proficiency rates on those tests remain above the statewide rates in seven out of eight program areas.
- As with the AP and SAT results, EOC tests and the 10th grade Writing assessment also show significant performance gaps between students in different ethnic groups, as well as gaps by socioeconomic status, limited English proficiency status, and disability status. The size and trends for these gaps, however, vary by test.
- Reversing trends seen in elementary and middle school, male students outscored female students on eight of the ten EOC tests given in 2005-06, although female students do score higher on Algebra I, English I, and the 10th grade Writing assessment.

Other Student Outcomes

Retention, Graduation, and Dropout Rates

WCPSS students are promoted at a high rate, but differences exist in the percentage of students promoted by grade level, ethnicity, academic risk factors, and gender.

- As of the end of the 2005-06 school year, 96% of WCPSS' students K-12 were promoted; while 4% were retained (4,876 students).
- High school had the highest retention rates, especially at grade 9 (15%), but also at grades 10 (9%) and 11 (5%).
- Elementary had the next highest retention rate, especially at Kindergarten and grade 1 (5%).
- Students in all NCLB subgroups (ethnicity, FRL, SWD, and LEP) in WCPSS are promoted at a high rate, ranging from 91% to 98%. LEP students had the highest rate of retention (9.3%).
- The four-year high school graduation rate for WCPSS in 2005-06 was 82.6 %. This rate was higher than most comparable NC school districts and the state as a whole.
- Graduation rates in 2005-06 were higher for female students than males. Student subgroups with the lowest graduation rates included students eligible for free or reduced-price lunch (59.7%), Hispanic/Latino students (57.7%), and students with limited English proficiency (51.5%).
- The 2005-06 WCPSS high school dropout rate was 3.9 %, a slight increase from 2004-05.
- Since 1998-99, the WCPSS high school dropout rate has been lower than the corresponding statewide rate.
- Hispanic/Latino students and Black/African-American students continue to show higher dropout rates than students from other ethnic subgroups.

Performance of WCPSS Graduates in the UNC System

The UNC system uses a variety of measures to track the performance of undergraduate students who matriculate to the various UNC institutions each year. Compared to UNC college students as a whole, WCPSS graduates are:

- More likely to have a grade point average above 3.0 after their first year,
- More likely to be returning to school following their first and second years,
- Less likely to take remedial courses in college, and
- More likely to graduate after five years.

Accountability Outcomes

ABCs Results

At the high school level, the introduction of new formulas underlying the state's accountability model in 2005-06 resulted in fewer schools meeting growth standards compared to previous years.

- Nine high schools met their Expected Growth Standards and five met their High Growth Standards in WCPSS in 2005-06, for a total of 71%. Prior to 2005-06, every WCPSS high school had met at least their Expected Growth Standard since 1998-99.
- Only Green Hope High School was able to earn the Honor School of Excellence designation in 2005-06. Six additional high schools were designated as Schools of Distinction.
- In part due to the underlying logic of the state's new growth model, growth results by EOC test varied widely, with the vast majority of high schools meeting the Expected or High Growth Standard in Algebra I and English I, while no high school did so in Physics.

Adequate Yearly Progress (AYP) Results

- Overall, nine out of 19 (47%) of WCPSS high schools made AYP in 2005-06. This was the highest percentage of high schools making AYP in WCPSS since the inception of the No Child Left Behind Act. Five additional high schools failed to achieve AYP by missing only one or two targets.
- Across all high schools, 344 (92%) of 375 possible targets were achieved. The most commonly missed targets involved students eligible for free or reduced price lunch and students with disabilities.
- At the school system level, despite meeting over 90% of targets (71 of 76), WCPSS entered Title I "district improvement" status. This was because reading targets were missed in all three grade spans (3-5, 6-8, and 10) for two consecutive years (2004-2005 and 2005-2006). A system-wide plan for improvement will be implemented in response, as required by federal law.

INTRODUCTION

PURPOSE

The purpose of this volume is to provide those interested in high school outcomes with all the data we have available about student outcomes and effective practices in one volume. Separate volumes are being produced for elementary and middle school staff. We believe these volumes will be helpful to members of the Board of Education, school staff, central services staff, parents, and community members. This report differs from those written in the past, when the Evaluation and Research Department (E&R) has produced separate reports and bulletins reflecting results on various tests and other student outcomes.

Within each volume, the sections include:

- Demographic trends as of spring of each year, to help interpret student outcomes.
- Testing outcomes, which are organized by type of assessment (SAT, AP, End-of-Course, etc.). Other student outcomes, including retention and graduation rate data, are also provided.
- Accountability outcomes, including school performance on state ABCs and federal AYP standards.
- Findings related to effective practices at the high school level from E&R studies, to provide ideas on what may or may not be helpful to students.

Decision Rules

Across the various sections of the report, the data presented represent all students in the school system with a few exceptions. Results from state-mandated tests in this report (End-of-Course Tests and the Writing Tests) are based only on students able to take the standard version of those assessments. Results for small numbers of students who take alternate or alternative tests in lieu of those standard assessments– primarily students with moderate to severe disabilities – are not included, as they are being reported in a separate document. These students are primarily those with moderate to severe disabilities and/or with limited English proficiency, and are relatively small in number, usually less than 5% of the student population. Therefore, the results in the End-of-Course and Writing sections of the report are based on the vast majority of the students in WCPSS in those grade levels.

Group Counts

Throughout this document, we emphasize patterns in results based on percentages. However, we have included enough information to allow the reader to determine the number of students reflected in particular groups whenever it adds clarity. In bar graphs, if a number is shown inside a bar or on top of a bar, it reflects the number of students actually shown in the bar (the numerator in a division problem). If counts are shown in footnotes or labels at the bottom of graphs, they represent the total number of students in that particular group considered for the analysis (the denominator).

Ways to Use

We hope our readers will be able to use this volume in several ways:

- To learn about basic trends in outcomes for WCPSS students over time;
- To study achievement and other student outcome gaps over time;
- To get a sense of how many students who are doing well and how many students may need additional assistance to succeed; and
- To understand what practices might help in efforts to assist students in need.

We welcome feedback on the format and content of this volume and whether it is useful to you. Ideas for improvement will help us produce a volume that is even more useful next year.

Acknowledgements

A volume this large and comprehensive could not possibly have been produced without the efforts of many people. Evaluation and Research Department staff who contributed to this report included Brad McMillen, David Holdzkom, Donna Eaton, Kevin Gilleland, Glenda Haynie, Amy Huebeler, Anne-Sylvie Boykin, Nancy Baenen, , r, Sarah Ives, Juliana Muli, Colleen Paeplow, Edie Pierce, Rosemary Reichstetter, Carol Speas, Wendy Stevens, Wanda Whisnant, Phyllis Spencer, Megan Townsend, Anisa Rhea, Kimberly Yaman, and work study student, Richard Innis. Their contributions and feedback were invaluable in the development of this report.

DEMOGRAPHIC TRENDS

In this section we describe the nature of the students served in WCPSS, along with the changes over time, as context for the student outcome data that follow. To make the demographic and outcome data as parallel as possible, we used student characteristics information in May 2006 from the WCPSS Student Information locator program and combined it with test results and other status information from E&R end-of-year summary files (as provided to the Department of Public Instruction). Thus, these figures will not match official 20th-day fall enrollments. For a few tables and figures which compared enrollment over time, only the May locators were used, so counts are slightly different. These are noted as appropriate.

K-12 Enrollment Trends by Ethnicity over Time

Across grades K-12, the number of students enrolled in WCPSS has been growing rapidly in recent years. Growth challenges all facets of the system's operations. As shown in Table 1, more than 23,500 new students have entered WCPSS schools since 2001, a 24% increase. For all ethnicities except American Indian, the numbers have increased each year. The numbers of Black/African American and Hispanic/Latino students have increased more rapidly than other ethnic groups.

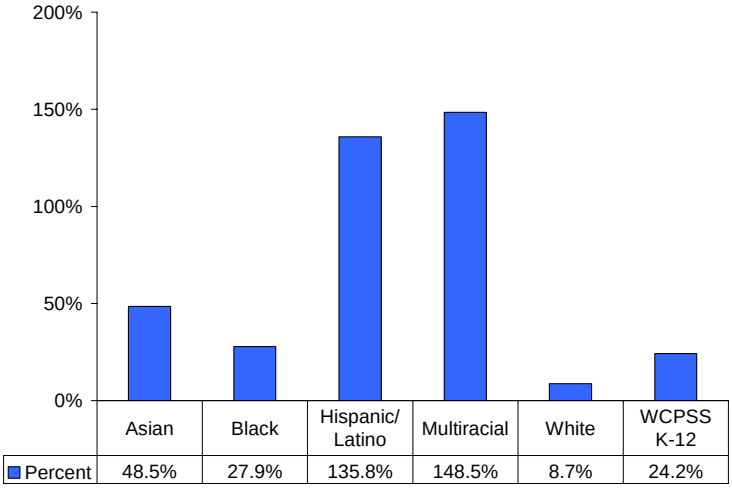
Table 1
Students by Ethnicity, Spring 2001-2006, Grades K-12

	2001	2002	2003	2004	2005	2006	Net Increase
American Indian	271	266	270	293	306	326	55
Asian	3,925	4,180	4,483	4,694	5,108	5,830	1,905
Black/African American	25,493	26,473	27,778	29,307	30,684	32,609	7,116
Hispanic/Latino	4,855	5,877	6,978	8,197	9,676	11,447	6,592
Multiracial	1,732	2,157	2,583	3,159	3,682	4,304	2,572
White	61,246	61,959	62,372	63,062	64,478	66,598	5,352
All WCPSS K-12	**97,522**	**100,912**	**104,464**	**108,712**	**113,934**	**121,114**	**23,592**

Source: Analysis of WCPSS May membership data.

The following figure shows the percent increase by ethnic group in spring 2006 compared with spring 2001; the Multiracial and Hispanic/Latino student groups more than doubled.

Figure 1
Percent Increase in Membership by Ethnicity
Spring 2001 through Spring 2006, Grades K-12

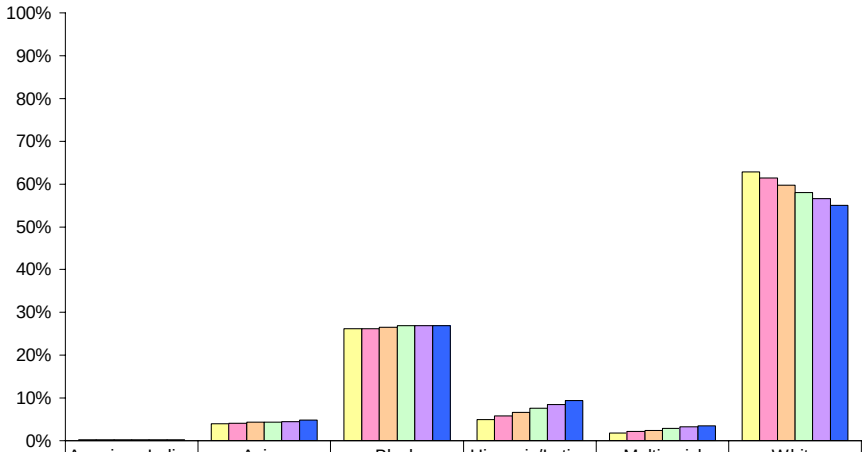


	Asian	Black	Hispanic/ Latino	Multiracial	White	WCPSS K-12
Percent	48.5%	27.9%	135.8%	148.5%	8.7%	24.2%

Source: Analysis of WCPSS May membership data.

Figure 2 displays growth as the percentage of the total district population represented by each ethnicity. The figure shows that although the absolute numbers increased, there is a decreasing percentage of White students relative to the total population. The largest percentage increases were for Hispanic/Latino students (up 5 percentage points) and Multiracial students (up 2 percentage points). Accordingly, the percentage of WCPSS students who are White decreased (even while the number of White students steadily increased).

Figure 2
Student Population by Ethnicity, Spring 2001-Spring 2006, Grades K-12



	American Indian	Asian	Black	Hispanic/Latino	Multiracial	White
2001 (97,522)	0.3%	4.0%	26.1%	5.0%	1.8%	62.8%
2002 (100,912)	0.3%	4.1%	26.2%	5.8%	2.1%	61.4%
2003 (104,464)	0.3%	4.3%	26.6%	6.7%	2.5%	59.7%
2004 (108,712)	0.3%	4.3%	27.0%	7.5%	2.9%	58.0%
2005 (113,934)	0.3%	4.5%	26.9%	8.5%	3.2%	56.6%
2006 (121,114)	0.3%	4.8%	26.9%	9.5%	3.6%	55.0%

Source: Analysis of WCPSS May membership data.

K-12 Enrollment Trends by Academic Risk Factor over Time

In this report, academic risk factors are defined as students who have limited English proficiency (LEP), students with disabilities (SWD), and/or students who eligible for free or reduced-price lunch (FRL). Students in these categories often have lower academic proficiency rates. Detailed analyses in WCPSS have shown having more than one of these academic risk factors correlates with even lower proficiency rates.

Enrollments increased for all academic risk subgroups between spring of 2001 and 2006, with the number of students who qualified as FRL increasing the most rapidly (see Table 2). The most common combinations of characteristics are FRL with LEP or SWD.

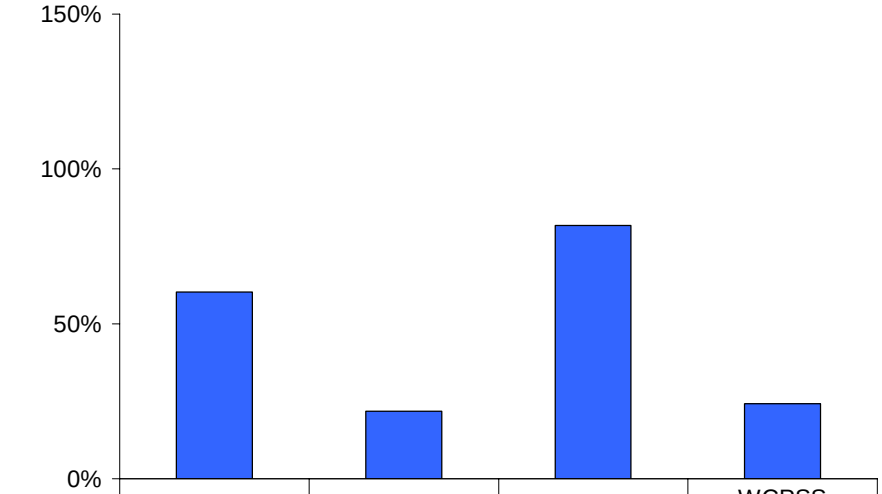
Table 2
Students by Academic Risk Factor, Spring 2001-2006, Grades K-12

	2001	2002	2003	2004	2005	2006
All FRL	21,959	24,172	25,782	28,428	30,881	35,195
All SWD	14,179	14,483	14,948	16,025	16,630	17,264
All LEP	4,398	5,451	6,610	5,659	6,371	7,989
FRL and LEP	2,686	3,455	4,157	3,801	3,982	5,429
FRL and SWD	4,806	5,134	5,320	5,851	6,050	6,752
LEP and SWD	72	96	128	109	115	128
FRL and LEP and SWD	204	289	387	408	441	553
All WCPSS	**97,522**	**100,912**	**104,464**	**108,712**	**113,934**	**121,114**

Source: Analysis of WCPSS May membership data.
Note: Students can be counted more than once in the top section of this table (duplicated count). Students are counted only once on the bottom part of the table (unduplicated count).

Figure 3 shows that, when the number within each academic risk group in spring 2006 is compared to spring 2001, the percentage of LEP and FRL students increased considerably more than the system overall. The number of LEP students came close to doubling (from 4,398 in May 2001 to 7,989 in May 2006), with an increase of 60% for FRL students (from 21,959 in May 2001 to 35,195 in May 2006). While the number of SWD students increased, the percentage of WCPSS students who are SWD increased about as much as the district population overall. Students with more than one characteristic, while relatively small in numbers, also increased more than the system increase in population overall (not shown).

Figure 3
Increase in Membership by Academic Risk Factor
Spring 2001 through Spring 2006, Grades K-12

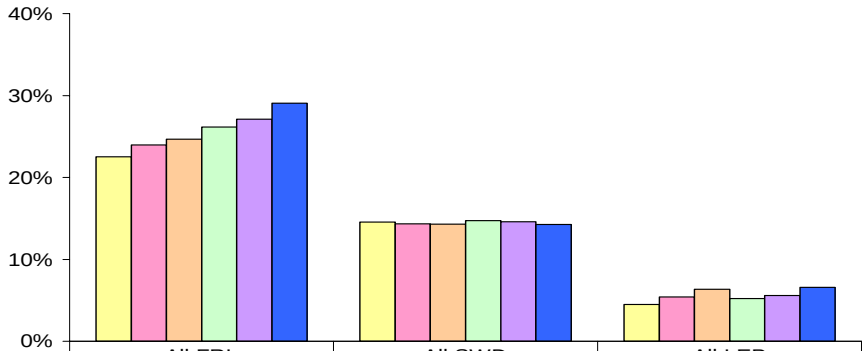


	All FRL	All SWD	All LEP	WCPSS K-12
Percent	60.3%	21.8%	81.7%	24.2%

Source: Analysis of WCPSS May membership data.

While the proportion of students who are LEP or who qualify for FRL has increased over time, the percentage of students with disabilities has declined slightly, although the number of students in all academic risk categories has increased substantially.

Figure 4
Student Population by Academic Risk Factor, Spring 2001-2006, Grades K-12



	All FRL	All SWD	All LEP
2001 (97,522)	22.5%	14.5%	4.5%
2002 (100,912)	24.0%	14.4%	5.4%
2003 (104,464)	24.7%	14.3%	6.3%
2004 (108,712)	26.1%	14.7%	5.2%
2005 (113,934)	27.1%	14.6%	5.6%
2006 (121,114)	29.1%	14.3%	6.6%

Source: Analysis of WCPSS May membership data.

Table 3 shows gender patterns within academic risk groups by ethnicity. The primary differences are within SWD groups, where the number of males is approximately double that of females in almost every comparison where SWD is involved.

Table 3
Students with Academic Risk Factors by Gender by Ethnicity, Spring 2006, Grades K-12

		Am Indian	Asian	Black	Hispanic/ Latino	Multi-Racial	White	Total
FRL	Female	50	474	9,780	3,985	721	2,410	17,420
	Male	46	424	9,469	4,226	683	2,520	17,368
	Total	96	898	19,249	8,211	1,404	4,930	34,788
SWD	Female	19	89	2,200	425	181	2,616	5,530
	Male	33	145	4,272	841	400	5,852	11,543
	Total	52	234	6,472	1,266	581	8,468	17,073
LEP	Female	2	498	255	2,968	46	227	3,996
	Male	3	562	248	3,125	58	272	4,268
	Total	5	1,060	503	6,093	104	499	8,264
FRL-SWD	Female	6	17	1,631	117	95	376	2,242
	Male	14	17	3,053	268	172	785	4,309
	Total	20	34	4,684	385	267	1,161	6,551
FRL-LEP	Female	1	169	200	2,315	22	87	2,794
	Male	1	165	178	2,262	23	84	2,713
	Total	2	334	378	4,577	45	171	5,507
SWD-LEP	Female	0	7	1	35	4	9	56
	Male	0	17	4	50	5	19	95
	Total	0	24	5	85	9	28	151
FRL-SWD-LEP	Female	0	12	14	193	2	8	229
	Male	0	11	26	375	4	9	425
	Total	0	23	40	568	6	17	654

Source: May 2006 (5/1/06) Student Locator merged into July 2006 End-of-Year Summary. Different dates of files resulted in slightly different counts than May alone (see Table 4).
Note: Duplicated count top section; unduplicated bottom section.

High School Enrollment Trends by Ethnicity over Time

Over the past six years, the WCPSS high school population has increased 33%, from just under 25,000 students in 2001 to over 33,000 in 2006. The number of students has increased each year for all ethnic groups (see the following table). The number of Black/African American students increased the most, followed by White, and then by Hispanic/Latino students.

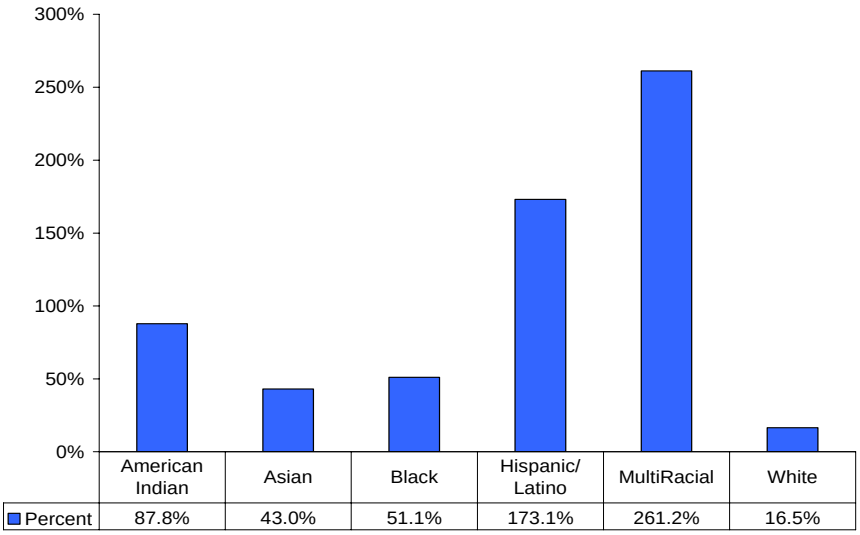
Table 4
High School Students by Ethnicity – Spring 2001 to Spring 2006

	2001	2002	2003	2004	2005	2006	Increase 2001 to 2006
Asian	1,042	1,109	1,197	1,230	1,339	1,490	448
American Indian	49	53	58	75	91	92	43
Black/African American	6,002	6,444	7,013	7,702	8,377	9,067	3,065
Hispanic/Latino	765	955	1,159	1,440	1,716	2,089	1,324
Multiracial	209	264	356	526	639	755	546
White	16,926	17,519	18,062	18,515	19,022	19,713	2,787
All WCPSS High School	**24,993**	**26,344**	**27,845**	**29,488**	**31,184**	**33,206**	**8,213**

Source: Analysis of WCPSS May membership data.

The following figure shows the percentage increase of each ethnicity in spring 2006 compared to spring 2001. The Multiracial population more than tripled (261%), increasing from 209 in May 2001 to 755 in May 2006, and the Hispanic/Latino population more than doubled (173%), increasing from 765 to 2,089 during the same period.

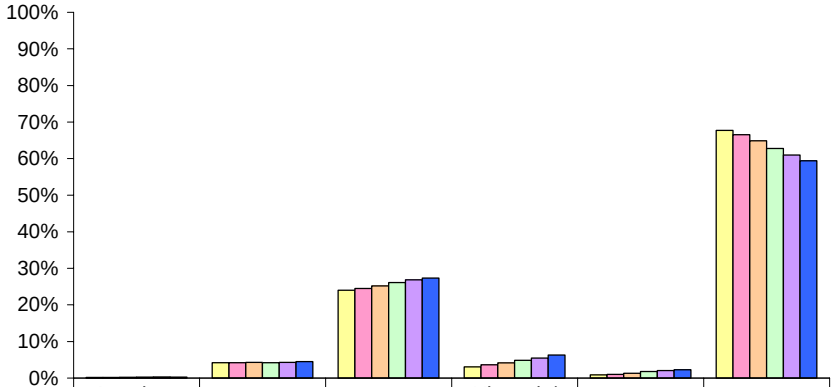
Figure 5
Percentage Increase in High School Student Membership by Ethnicity
Spring 2001 to Spring 2006



Source: Analysis of WCPSS May membership data.
Note: Counts shown in Table 4.

While Figure 5 shows that all ethnicities have increased, Figure 6 shows a decreasing percentage of White students relative to the total high school population. The graphic indicates a growing percentage of Black/African American, Hispanic/Latino, and Multiracial students in WCPSS. With these three groups growing at a faster pace, White students represent decreasing percentages of the overall membership.

Figure 6
Percentage of High School Student Population by Ethnicity – Spring 2001 to Spring 2006



	American Indian	Asian	Black	Hispanic/ Latino	Multiracial	White
2001 (24993)	0.20%	4.17%	24.01%	3.06%	0.84%	67.72%
2002 (26344)	0.20%	4.21%	24.46%	3.63%	1.00%	66.50%
2003 (27845)	0.21%	4.30%	25.19%	4.16%	1.28%	64.87%
2004 (29488)	0.25%	4.17%	26.12%	4.88%	1.78%	62.79%
2005 (31184)	0.29%	4.29%	26.86%	5.50%	2.05%	61.00%
2006 (33206)	0.28%	4.49%	27.31%	6.29%	2.27%	59.37%

Source: Analysis of WCPSS May membership data.

High School Enrollment Trends by Academic Risk Factor over Time

More than 8,000 additional students have entered WCPSS high schools since 2001, a 33% increase. Table 5 shows the number of high school students in membership by free and reduced lunch (FRL), students with disabilities (SWD), and limited English proficiency (LEP) in the spring of each year as well as combinations of these academic risk factors. All three academic risk factor categories show increases since 2001 that outpace the overall level of growth in the high school student population during that same time span. In each year, those students with the FRL academic risk factor outnumbered other students with risk factors, followed by those students with the SWD academic risk factor.

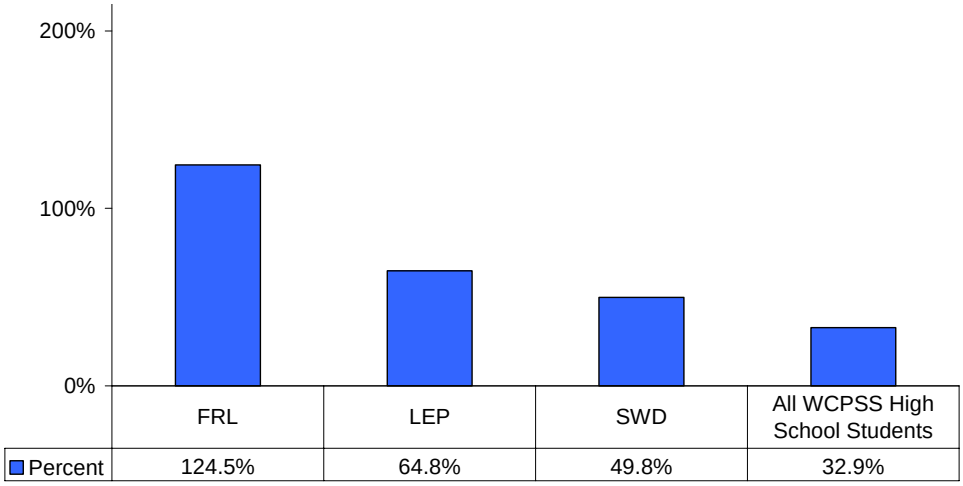
Table 5
Increase in High School Students by Academic Risk Factor – Spring 2001 to Spring 2006

	2001	2002	2003	2004	2005	2006
All FRL	3,005	3,446	3,989	4,790	5,547	6,745
All SWD	3,125	3,398	3,604	3,992	4,357	4,682
All LEP	736	873	1,055	715	916	1,213
FRL and LEP	355	442	502	396	513	722
FRL and SWD	717	865	995	1,163	1,335	1,573
LEP and SWD	10	12	16	9	15	20
FRL & LEP & SWD	8	11	17	14	25	46
All WCPSS High School	24,993	26,344	27,845	29,488	31,184	33,206

Source: Analysis of WCPSS Student Locator annual May data.

Figure 7 shows the percentage increase of each academic risk factor category. The FRL category shows the greatest increase (125%), growing from 3,005 in May 2001 to 6,745 in May 2006.

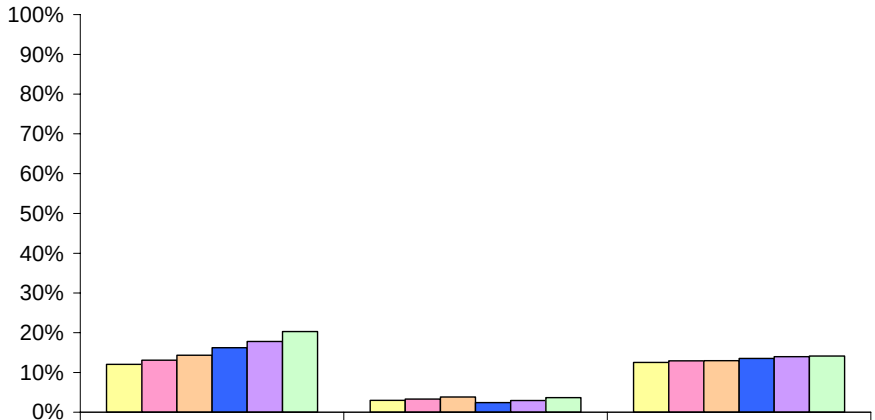
Figure 7
Percentage Increase in High School Student Membership by Academic Risk Factor
Spring 2001 to Spring 2006



Source: Analysis of WCPSS Student Locator annual May data.

Figure 8 displays the percentage of the overall high school population each year by all FRL, all SWD, and all LEP academic risk factors. The graphic indicates a marked, steadily increasing percentage of free and reduced lunch (FRL) students compared to the other two academic risk factors.

Figure 8
Percentage of High School Student Population by Academic Risk Factor
Spring 2001 to Spring 2006



	FRL	LEP	SWD
2001 (24,993)	12.02%	2.94%	12.50%
2002 (26,344)	13.08%	3.31%	12.90%
2003 (27,845)	14.33%	3.79%	12.94%
2004 (29,488)	16.24%	2.42%	13.54%
2005 (31,184)	17.79%	2.94%	13.97%
2006 (33,206)	20.31%	3.65%	14.10%

Source: Analysis of WCPSS Student Locator annual May data

It should be noted that, even though the numbers of students in multiple academic risk categories are small as indicated in Figure 8 above, the percentage of these students increased greatly from 2001 to 2006:

- FRL and LEP: 103%.
- FRL and SWD: 119%.
- LEP and SWD: 100%.
- FRL, LEP, and SWD: 475%.

Twenty percent (20%) of high school students were eligible for free or reduced price lunch (FRL) in 2005-06. Of that 20%, about two-thirds of them were not represented in either the SWD or LEP categories. However, 4.6% also had SWD as a combined factor, 2.2% were coupled with LEP, and another 0.2% had LEP and SWD combined with FRL as factors that could affect their success level.

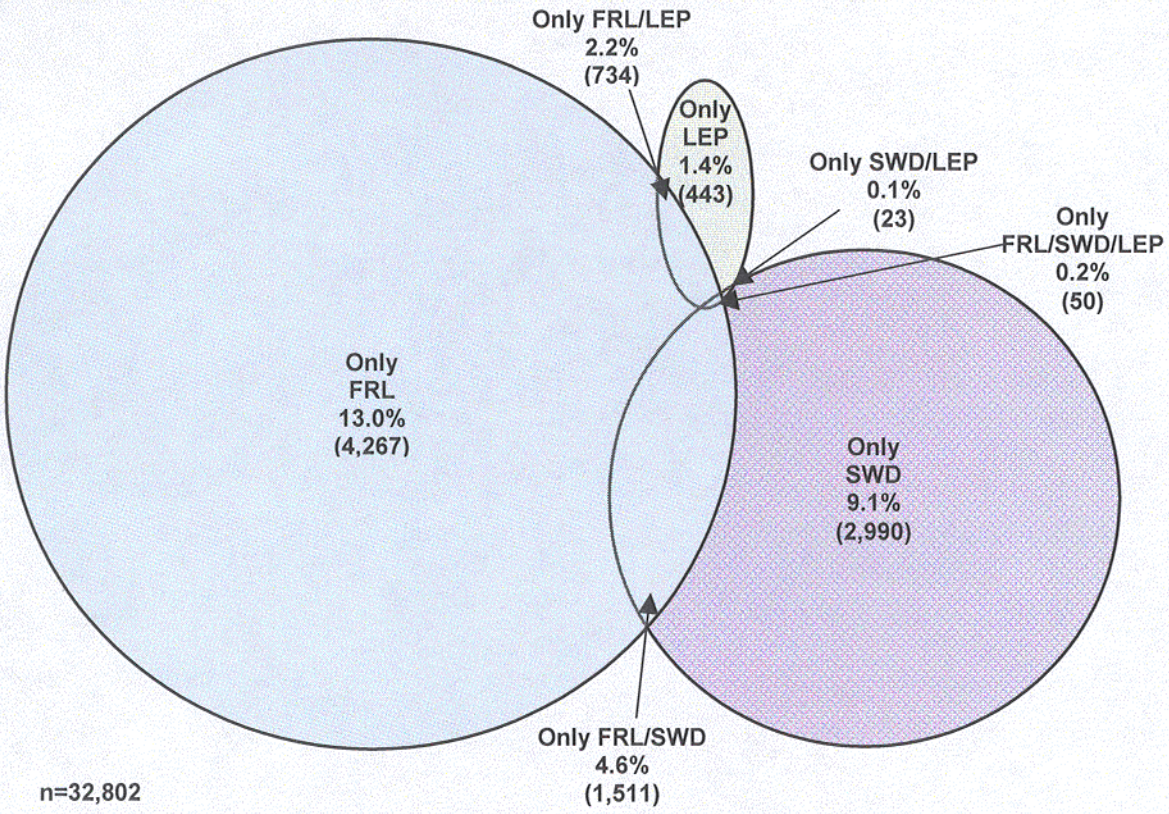
The merged dataset showed 13.9% of the students had SWD as an academic risk factor and 3.8% had LEP as an academic risk factor. Of the SWD and LEP students, 0.1% had both of these two academic risk factors, while 9.1% of the SWD students had SWD as a single factor and 1.4% of the LEP students had LEP as a single factor (see Figure 9).

Figure 9 proportionately displays the distribution of FRL, SWD, and LEP students at the high school level. As of May 2006, 12,386 (37.8%) of high school students were identified with FRL, SWD, or LEP academic risk characteristics. Of these, the most common was FRL at 6,562

(20%); 4,574 (13.9%) were SWD, and 1,250 (3.8%) were LEP. Some of these students (6.9%) had two of the characteristics. Less than 1% of these students were identified as having all three of the academic risk characteristics.

- Of the 20% FRL students in WCPSS, 4,267 (13%) were identified as having FRL as a single academic risk characteristic; 1,511 (4.6%) were identified also with SWD as an additional academic risk factor, as were 734 (2.2%) identified with LEP as an additional academic risk factor. Another 50 (0.2%) had all three of the risk characteristics.
- Of the 13.9% SWD students in WCPSS, 2,990 (9.1%) were identified as having SWD as a single risk characteristic; another 23 (0.1%) were identified with LEP as an additional academic risk factor.
- Of the 3.8% LEP students in WCPSS, 443 (1.4%) were identified as having LEP as a single risk characteristic.

Figure 9
Percentage of All High School Students with Academic Risk Factors, Spring 2006



Source: May 2006 (5/1/06) Student Locator merged into July 2006 End-of-Year Summary

High School Students with Academic Risk Factors by Gender and by Ethnicity

Table 6 shows the percentage of students in the FRL, SWD, and LEP categories at the high school level by gender and ethnic group. These data indicate that the number of males in the SWD and the FRL-SWD categories are almost twice as high as the number of females. Of additional note is that the number of Black/African American students is disproportionately higher in the FRL- and SWD-related categories. In addition, the number of Hispanic/Latino students is disproportionately higher in LEP-related categories.

Table 6
High School Students with Academic Risk Factors by Gender by Ethnicity, Spring 2006

Risk Factor	Gender	Am Indian	Asian	Black	Hispanic/Latino	Multi-Racial	White	Total
FRL	Female	11	110	2,258	518	93	445	3,435
	Male	3	111	1,928	534	72	479	3,127
	Total	14	221	4,186	1,052	165	924	6,562
SWD	Female	8	24	666	85	29	759	1,571
	Male	2	22	1,170	119	59	1,631	3,003
	Total	10	46	1,836	204	88	2,390	4,574
LEP	Female	0	102	78	372	3	45	600
	Male	1	108	77	414	1	49	650
	Total	1	210	155	786	4	94	1,250
FRL-SWD	Female	0	1	437	38	15	80	571
	Male	0	3	722	46	15	154	940
	Total	0	4	1,159	84	30	234	1,511
FRL-LEP	Female	0	45	61	246	2	16	370
	Male	0	45	55	246	0	18	364
	Total	0	90	116	492	2	34	734
SWD-LEP	Female	0	1	0	7	1	1	10
	Male	0	1	1	8	0	3	13
	Total	0	2	1	15	1	4	23
FRL-SWD-LEP	Female	0	4	3	13	0	1	21
	Male	0	2	4	21	0	2	29
	Total	0	6	7	34	0	3	50

Source: May 2006 (5/1/06) Student Locator merged into July 2006 End-of-Year Summary. Different dates of files resulted in slightly different counts than May locator alone.
Note: Duplicated count top section; unduplicated bottom section.

Monitoring the numbers and distribution of students across these three categories is particularly important since membership in these categories is historically associated with lower academic performance. The subsequent sections of this document will detail overall academic outcomes on a variety of measures for high school students, including the performance of these subgroups of students.

TESTING OUTCOMES

SAT RESULTS

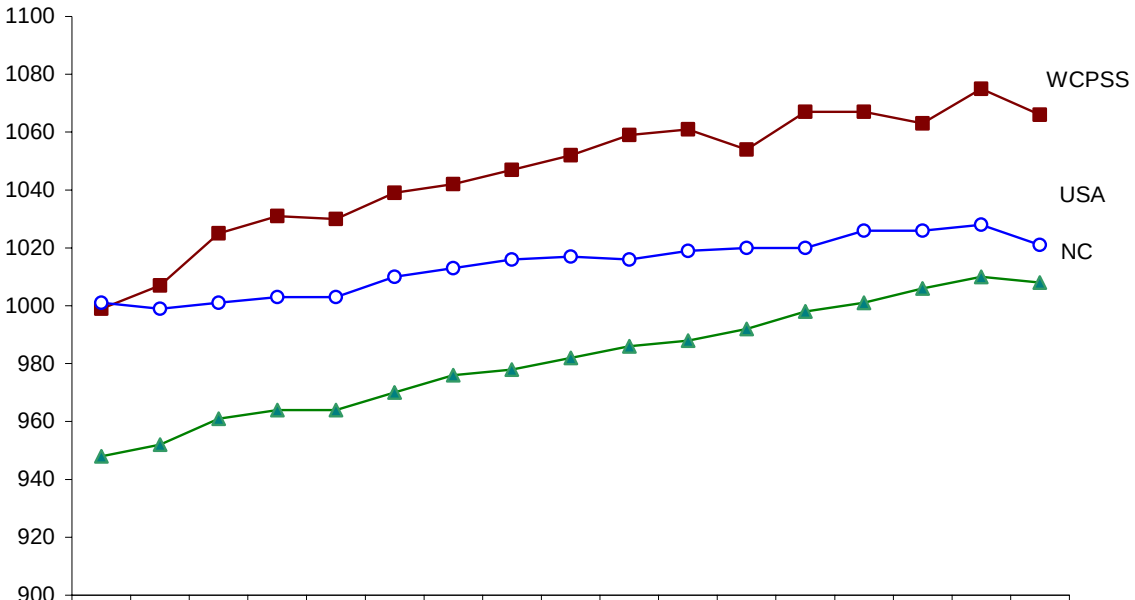
The SAT, formally known as the SAT I Reasoning Test, is a national examination offered by the College Board. The exam measures potential for success at the post-secondary level and is required for admission to many colleges and universities. The SAT administered in 2005-06 was a three-hour test of general verbal and mathematical skills along with a new writing component. All three components of the exam used a multiple-choice format, and were scored on a scale from 200 to 800 points. Nationwide, over 1.4 million students in the 2005-06 graduating class took the SAT, representing about half of all high school graduates (College Board, 2006). For additional information about the SAT, consult the College Board's Web site at http://www.collegeboard.com.

This section of the report summarizes national, state, and WCPSS SAT data for seniors who took the test any time during their high school years through March 2006. If a student took the test more than once, the most recent score is used.

Although students can take the SAT multiple times during their high school years, the College Board reports only the most recent test score of students who indicate they plan to graduate in the reporting year. Students are counted only once no matter how often they took the exam.

Since 1990, the average SAT combined score (historically reported as verbal and mathematics only, not including the writing component) for WCPSS students has increased 67 points, from 999 to 1066. The average score for North Carolina during that same time span has increased 60 points, while the average for the U.S. has gone up 20 points. Thus, the gap between WCPSS SAT performance and that of North Carolina and the nation has increased since 1990.

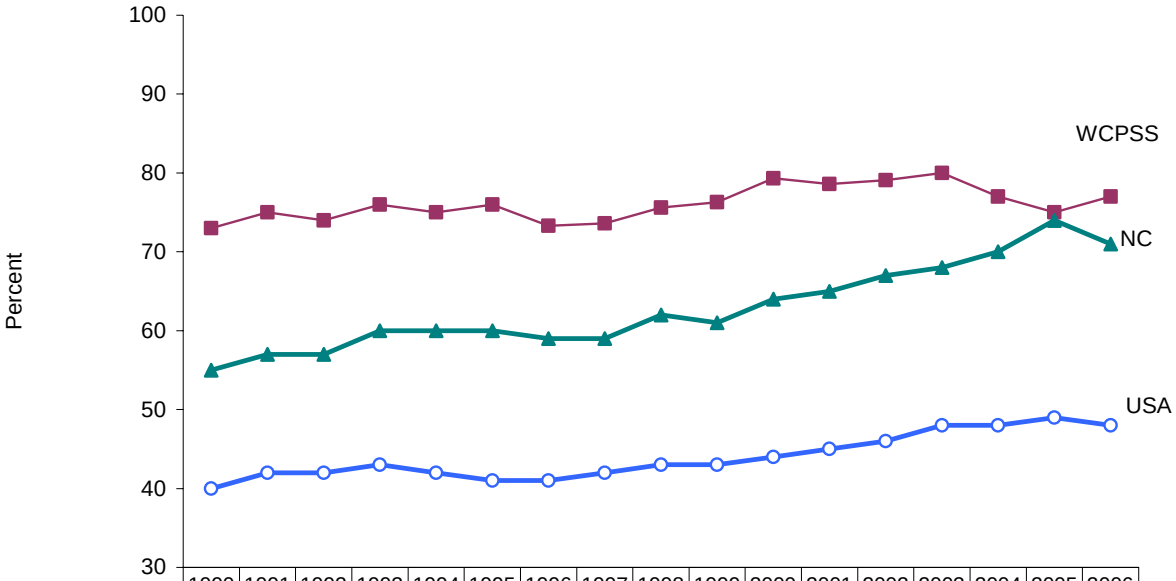
Figure 10
SAT Performance for WCPSS, NC and the US
1990-2006



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
WCPSS	999	1007	1025	1031	1030	1039	1042	1047	1052	1059	1061	1054	1067	1067	1063	1075	1066
USA	1001	999	1001	1003	1003	1010	1013	1016	1017	1016	1019	1020	1020	1026	1026	1028	1021
NC	948	952	961	964	964	970	976	978	982	986	988	992	998	1001	1006	1010	1008

The SAT participation rate for WCPSS students (defined as the percentage of graduating seniors in a given year who took the SAT prior to graduating) has always exceeded the corresponding rates for the state and the nation. However, North Carolina has experienced a 16 percentage point change on this dimension, moving from 55% to 71% since 1990. The state is now within 6 percentage points of the WCPSS rate, which has risen from 73% in 1990 to 77% in 2006. Nationally, there have never been more than 49% of students participating in the SAT during the 17-year period under consideration.

Figure 11
SAT Participation Rates for WCPSS, NC and the US
1990-2006



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
WCPSS	73	75	74	76	75	76	73.3	73.6	75.6	76.3	79.3	78.6	79.1	80	77	75	77
NC	55	57	57	60	60	60	59	59	62	61	64	65	67	68	70	74	71
USA	40	42	42	43	42	41	41	42	43	43	44	45	46	48	48	49	48

Table 7
2005-06 SAT Participation Rates and Performance

	Part. Rate	Math	Verbal	M+V	Writing	M+V+W
USA	48%	518	503	1021	497	1518
NC	71%	513	495	1008	485	1493
WCPSS	77%	544	522	1066	510	1576

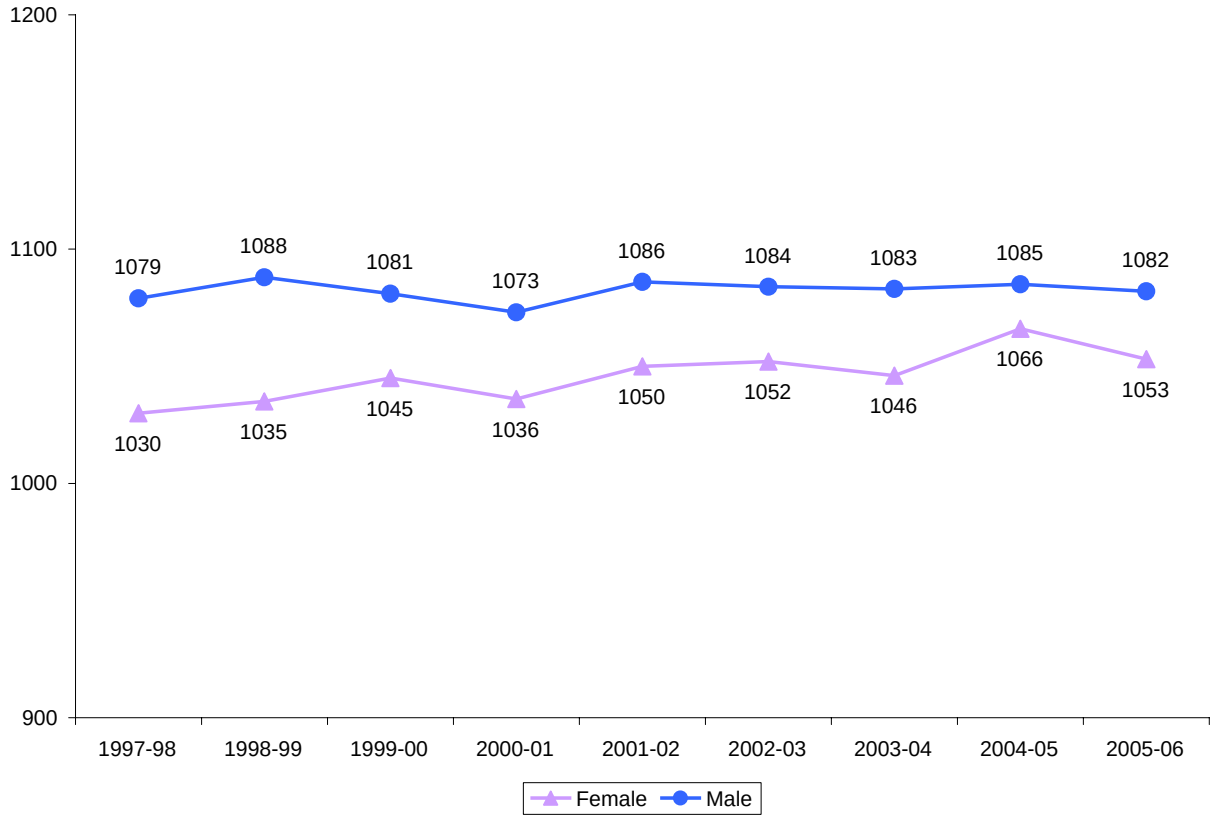
Note: The participation rate is the percentage of 2005-06 graduating seniors who took the SAT I.

In 2005-06, students in Wake County Public Schools (WCPSS) posted average SAT scores of 544 in mathematics, 522 in verbal, and 510 in writing. The combined score for verbal and mathematics was 1066, while the total score was 1576. The combined verbal and mathematics score was 9 points lower than the combined score for 2004-2005. Declines in average verbal/mathematics scores were also noted for North Carolina and for the nation as a whole. However, the 1066 score for WCPSS students continues a trend of improving scores observed over the last 17 years.

SAT Results By Subgroup

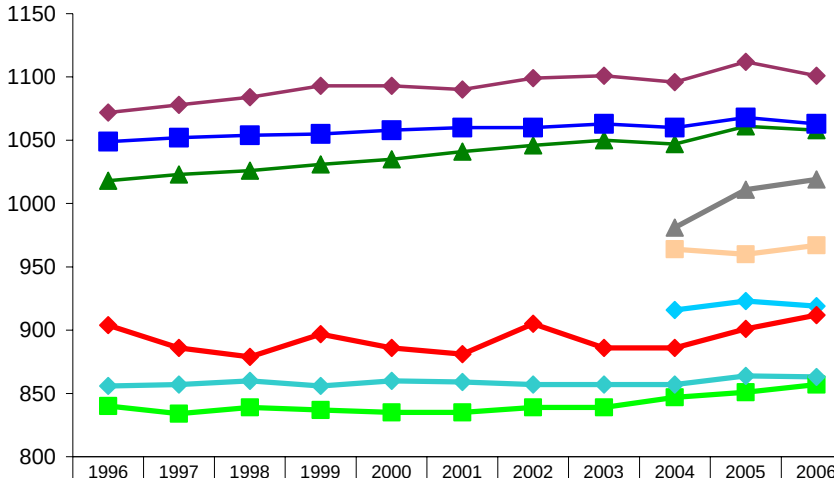
Historically, male students have outperformed female students on the SAT. Over the past several years, however, this gap has narrowed from 49 points in 1997-98 to 29 points in 2005-06 (Figure 12). Interestingly, the nine-point drop in total SAT scores seen in 2005-06 in WCPSS (see Figure 12) is almost entirely attributable to the drop among female students.

Figure 12
SAT Performance by Gender
WCPSS, 1998-2006



The gap in total SAT scores (math and verbal sections) between Black/African American and White students are reported in Figure 13. The size of this gap, both statewide and nationally, has hovered around 200 points since 1996. In WCPSS, while the current gap is slightly smaller, it has been widening over that same time span, largely due to an increase in scores among White students while scores for Black/African-American students have remained largely flat. Scores for Hispanic/Latino students in WCPSS are substantially higher than both the state and national figures, and have risen in each of the past two years.

Figure 13
SAT Performance by Ethnicity
WCPSS, 1996-2006



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
WCPSS White	1072	1078	1084	1093	1093	1090	1099	1101	1096	1112	1101
NC White	1018	1023	1026	1031	1035	1041	1046	1050	1047	1061	1058
USA White	1049	1052	1054	1055	1058	1060	1060	1063	1060	1068	1063
WCPSS Hispanic									981	1011	1019
NC Hispanic									964	960	967
USA Hispanic									916	923	919
WCPSS Black	904	886	879	897	886	881	905	886	886	901	912
NC Black	840	834	839	837	835	835	839	839	847	851	857
USA Black	856	857	860	856	860	859	857	857	857	864	863

Note: Data for Hispanic/Latino students not reported prior to 2003-04 due to less than 100 test-takers in WCPSS.

In summary, it may be observed that students in WCPSS did not achieve the same average mathematics and verbal combined score on the SAT in 2005-06 as was true the prior year. This was also true for the U.S. as a whole and for North Carolina. However, WCPSS students have made steady progress over the long term in improving SAT scores. The increased participation rate in 2005-06 is noteworthy as is the average writing score in WCPSS, which exceeded averages for the state and the nation.

ADVANCED PLACEMENT RESULTS

The purpose of the Advanced Placement (AP) program is to offer college-level courses to high school students. Administered by the College Board, the AP program includes both courses as well as a testing program which colleges and universities may utilize to grant credit to students who have done well on AP examinations. More than 15,000 U.S. high schools offer AP coursework of some kind, and more than 1.2 million U.S. high school students took at least one AP exam during the 2004-05 school year (College Board, 2005).

Administered each spring, AP examinations test students' ability to perform at college level in 19 subject areas. AP examinations are scored on a five-point scale.

The scale is defined by the College Board as follows:

1—no recommendation
2—possibly qualified
3—qualified
4—well qualified
5—extremely well qualified

Many colleges and universities provide course credit to students scoring a 3 or higher on some AP exams. For additional information about AP courses and the AP testing program, consult the College Board's Web site at http://www.collegeboard.com .

AP Course Participation

Participating in an AP course can give high school students exposure to more rigorous curricula and higher performance expectations than might otherwise be available to them through a typical high school course. Primarily taken by juniors and seniors, AP courses provide students with the opportunity to learn material in greater breadth and depth while in turn demanding more from them in terms of assignments and assessments. While many AP courses have prerequisite courses that students must complete successfully before they can enroll, others do not.

All high schools strive to make advanced coursework such as AP courses accessible to as many students as possible. However, the intellectual demands of those courses (and/or the school's perceptions of those demands) can discourage some students from enrolling. Requirements from the College Board with regard to curriculum standards and teacher preparation also may make it difficult for schools to offer the range of courses and number of sections of a course that would allow every student to take every AP course that they desired.

Due to their prestigious reputation and the high-quality learning experience that these courses can offer to students, AP course-taking is often used as an indicator of both excellence and equity at the high school level. Figure 14 shows that the number of AP course enrollments in WCPSS has been rising over the past three years. While the overall student population has also been increasing during this time, the growth in AP enrollments outpaces student population growth (e.g., the increase is not just attributable to enrollment growth). This increase is also

evident across various student subgroups (Figure 15). American Indian students are the only ethnic subgroup that has not experienced an increase in AP enrollments since 2002-03.

Figure 14
Number of AP Course Enrollments in WCPSS, 2003-2006

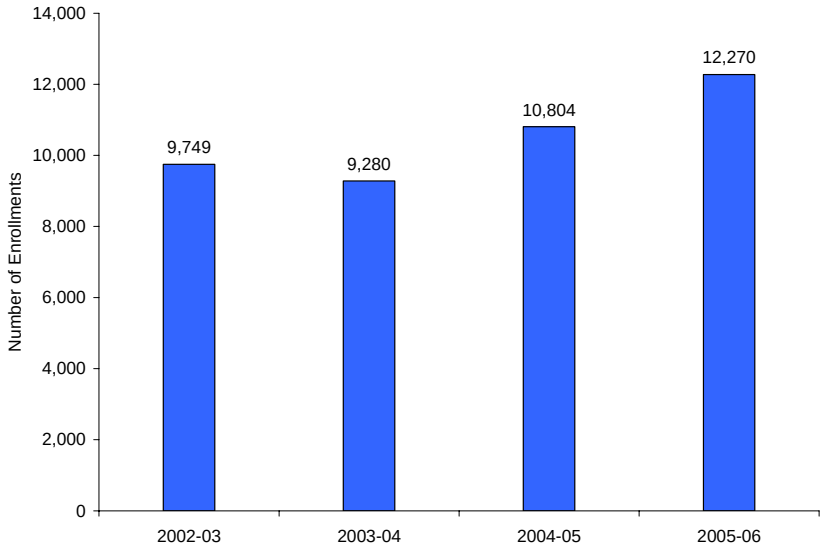
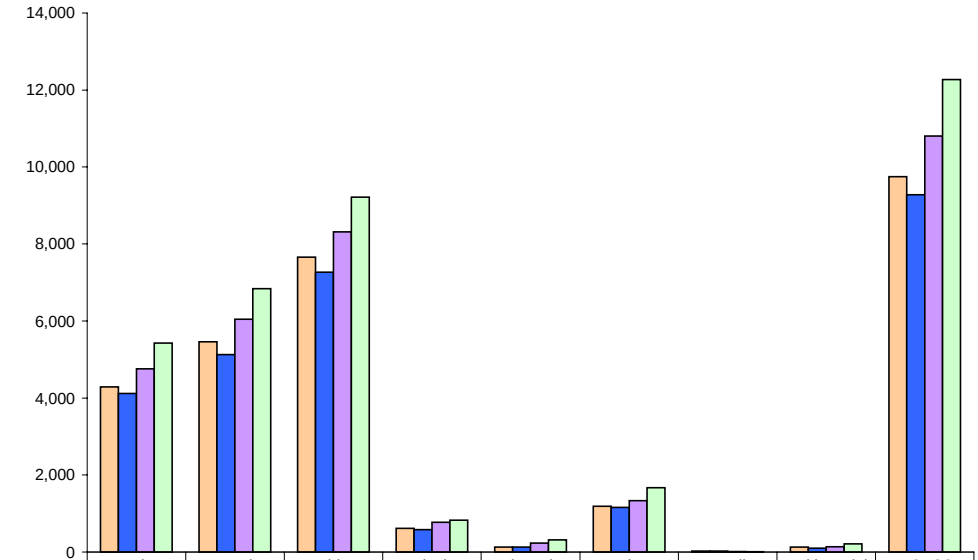


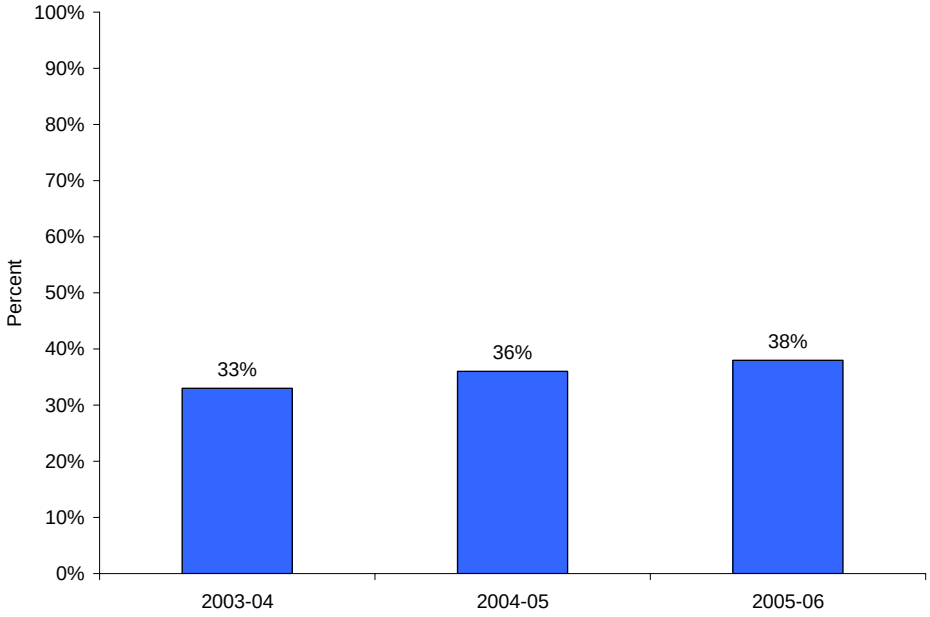
Figure 15
Number of AP Course Enrollments in WCPSS by Subgroup, 2003-2006



	Male	Female	White	Black	Hispanic	Asian	Am Indian	Multi-Racial	WCPSS
2002-03	4,288	5,461	7,657	617	132	1,188	25	130	9,749
2003-04	4,121	5,129	7,269	583	133	1,163	29	103	9,280
2004-05	4,759	6,045	8,313	772	232	1,333	15	139	10,804
2005-06	5,430	6,840	9,220	832	316	1,676	12	214	12,270

While the aforementioned data are based on enrollments, which in some cases involve the same students taking more than one course, it is also instructive to examine the number of *unique* students who are accessing AP courses, as it is often the same students who end up enrolling in multiple courses. In 2005-06, the 12,270 AP enrollments in WCPSS were accounted for by only 5,565 students – an average of 2.2 AP enrollments per AP student. Figure 16 displays the percentage of WCPSS high school students who enrolled in at least one AP course over the past three years. Similar to the trends for enrollments, this percentage has also been increasing in recent years, implying that the growth in AP enrollments is in part due to more individual students taking advantage of AP courses.

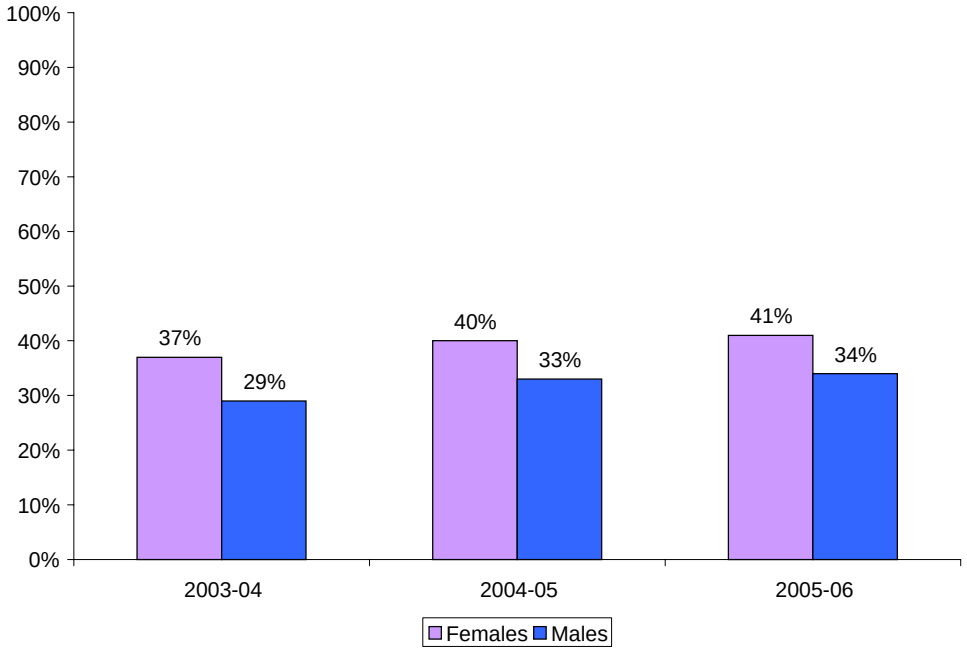
Figure 16
Percent of WCPSS Students Enrolling in AP Courses, 2004-2006



Note: Percentage is based on 11th and 12th grade students, as most AP course takers are in those grade levels.

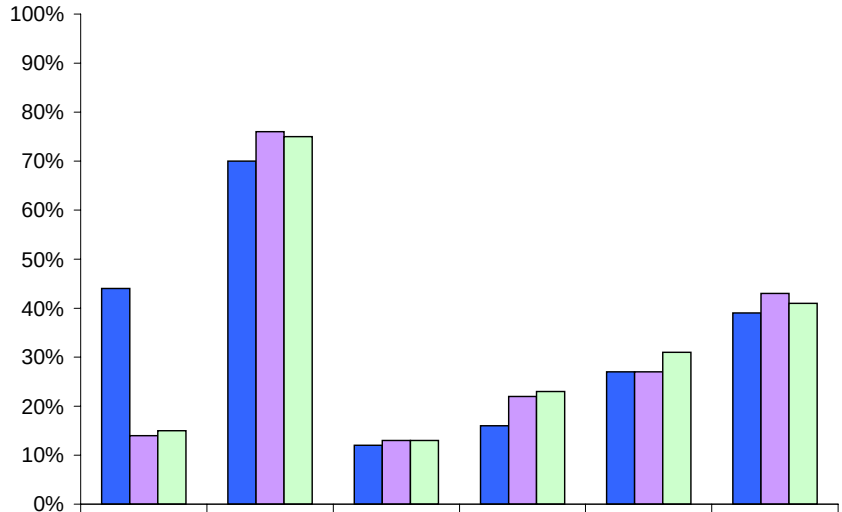
With respect to student subgroups, female students are more likely than male students to enroll in an AP course (Figure 17), a pattern which is continuing even as overall enrollment is rising. Figure 18 shows that Asian students are more likely than students from other ethnic groups to enroll in at least one AP course. The largest increase over the past three years, however, is among Hispanic/Latino students. In 2005-06, 23% of Hispanic/Latino students enrolled in at least one AP course, up from only 16% in 2003-04.

Figure 17
Percent of WCPSS Students Enrolling in AP Courses by Gender, 2004-2006



Note: Percentage is based on 11th and 12th grade students, as most AP course takers are in those grade levels.

Figure 18
Percent of WCPSS Students Enrolling in AP Courses by Ethnicity, 2004-2006



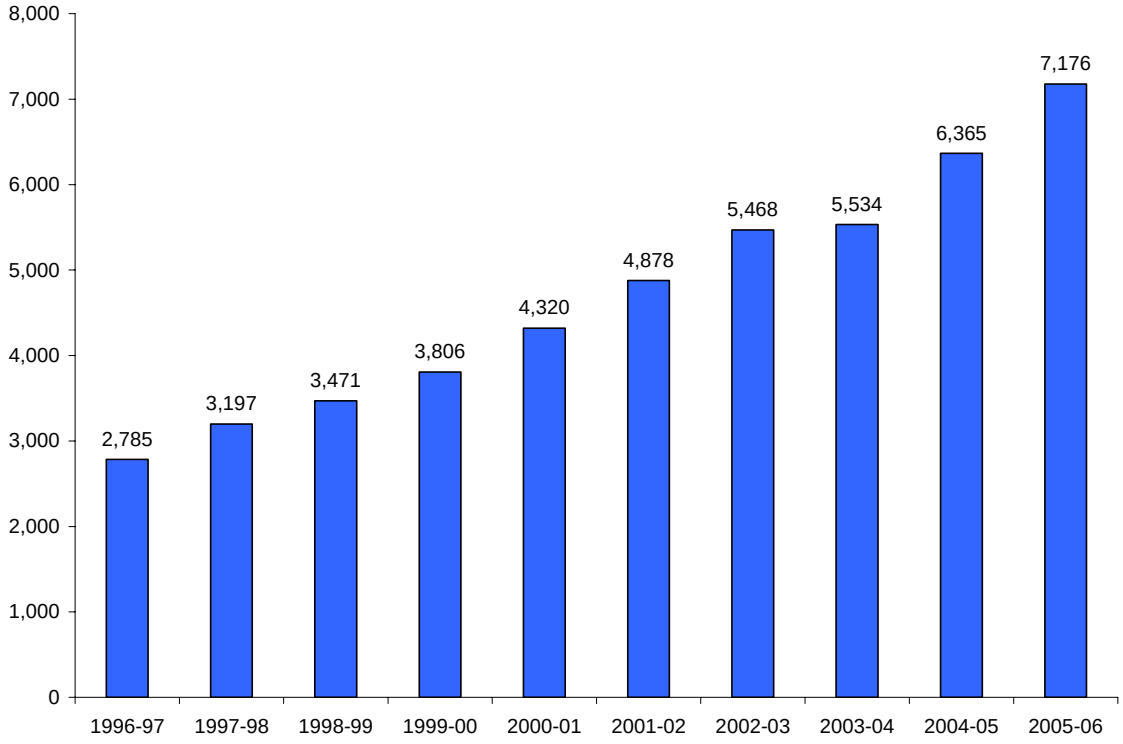
	American-Indian	Asian	Black	Hispanic	Multi-Racial	White
2003-04	44%	70%	12%	16%	27%	39%
2004-05	14%	76%	13%	22%	27%	43%
2005-06	15%	75%	13%	23%	31%	41%

Note: Percentage is based on 11th and 12th grade students, as most AP course takers are in those grade levels.

AP Exam Participation

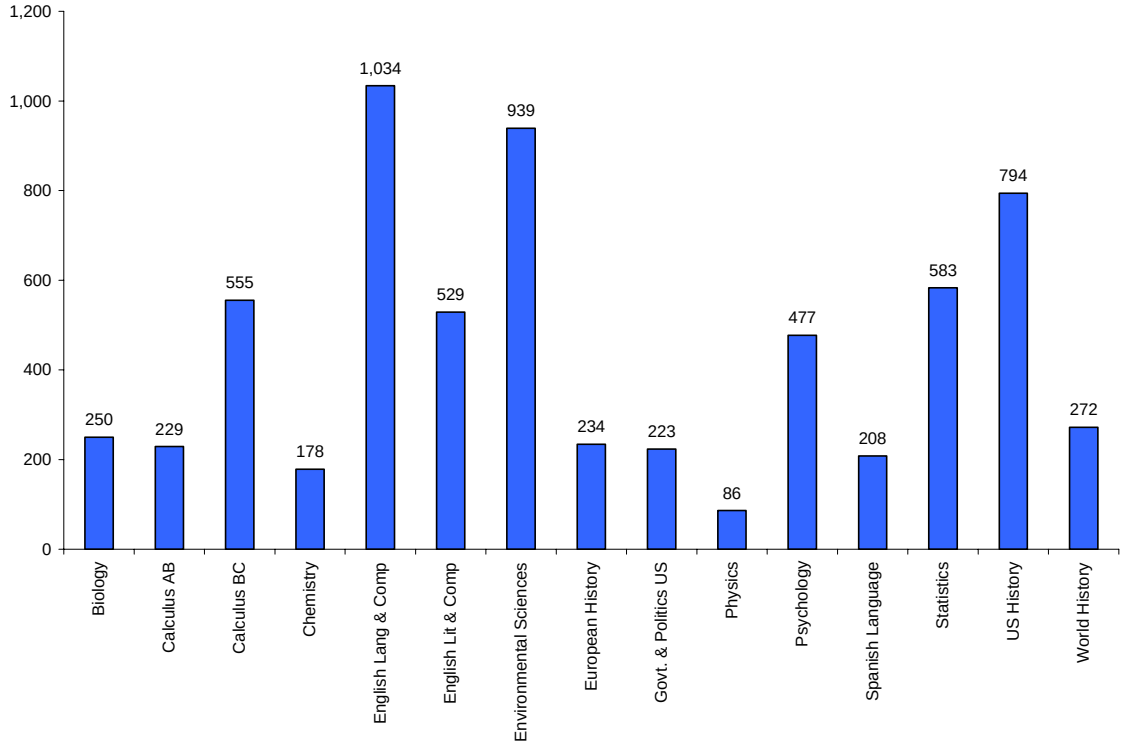
Not all high school students take AP courses, and not all students who take AP courses take the corresponding AP exams for those courses. In addition, there are a small number of students each year who take AP exams without taking the corresponding AP course. As the number of AP enrollments has increased, the total number of AP tests taken in WCPSS has increased as well over the past several years (Figure 19).

Figure 19
Number of AP Exams Taken, 1997-2006



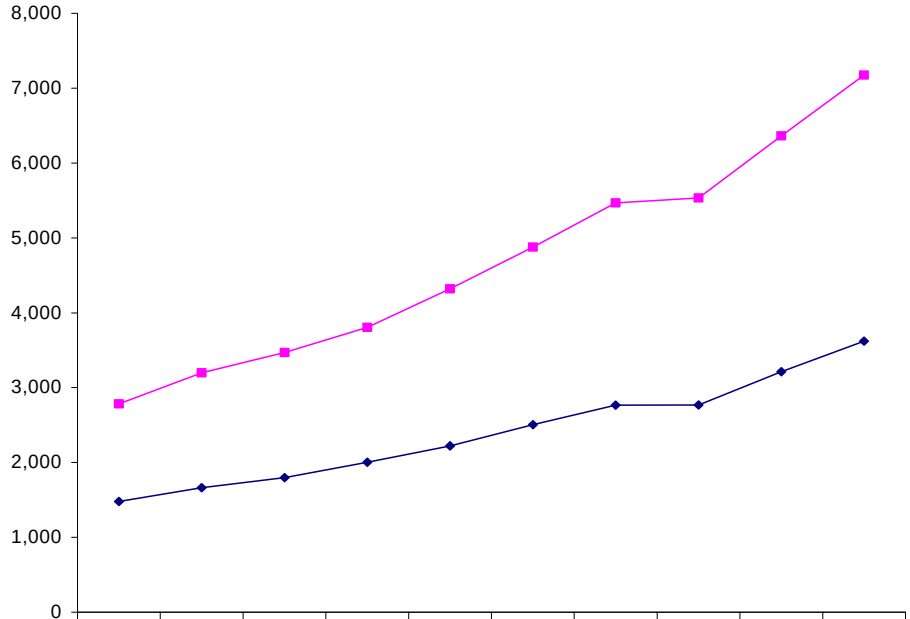
Among the available exams, the most commonly taken exams are listed in Figure 20. English Language and Composition, Environmental Science, and U.S. History were the most popular AP exams taken in 2005-06. This pattern has been largely consistent in WCPSS since 2003-04 (Wake County Public Schools, 2006).

Figure 20
AP Exams Taken by Course, 2005-06



As was true for AP enrollments, students often take more than one AP exam in a given year. Figure 21 shows that over the past several years, the number of unique students taking AP exams has increased proportionally along with the number of exams taken. In general, the number of unique students taking AP tests has been about one-half the number of tests taken. In other words, the average number of AP tests taken in a given year is about two per student.

Figure 21
Number of AP Test Takers and Number of AP Tests Taken, 1997-2006



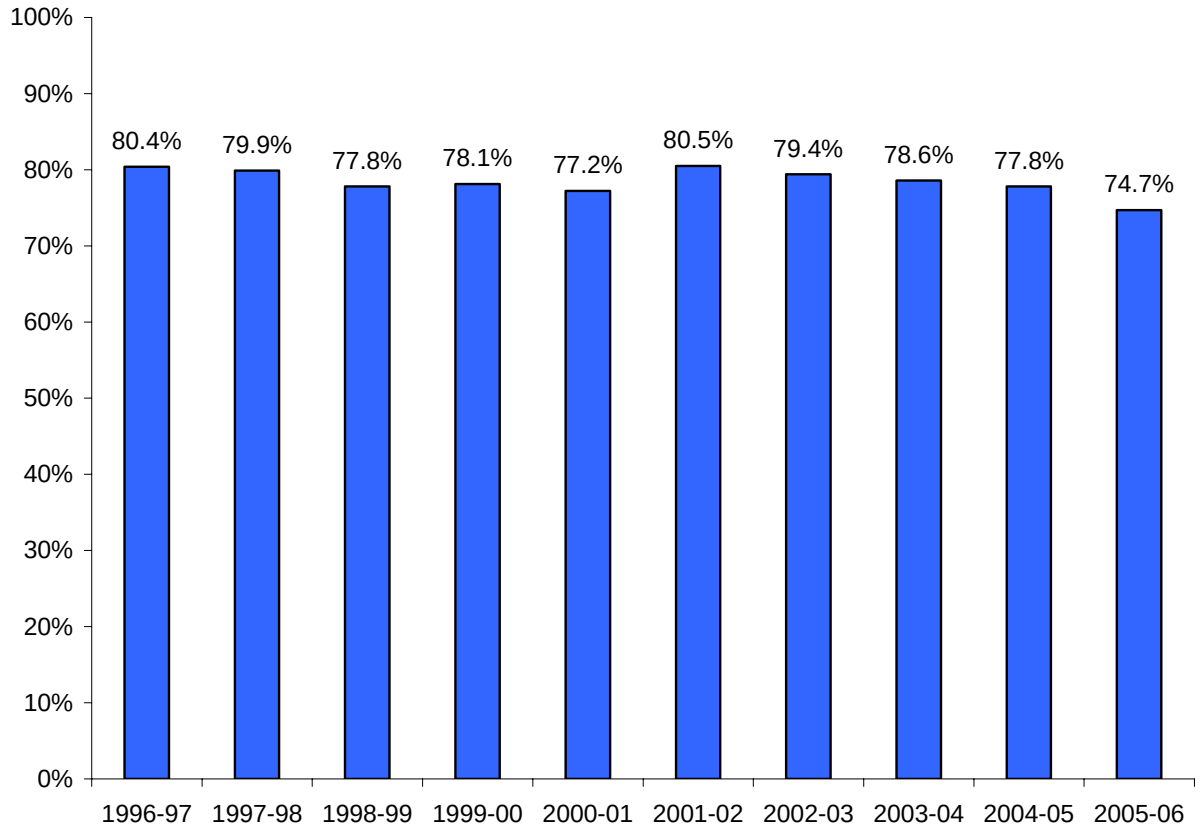
	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
# Students Taking Exams	1,480	1,663	1,798	2,004	2,223	2,506	2,766	2,768	3,212	3,621
# Exams Taken	2,785	3,197	3,471	3,806	4,320	4,878	5,468	5,534	6,365	7,176

AP Exam Performance

Scores on AP exams range from 1 to 5, and many colleges and universities award course credit for a score of 3 or higher. According to the College Board, an AP exam score of 3 or higher indicates sufficient mastery of course content to grant a student exemption from a college course, credit, or both (College Board, 2006). Thus, one common measure of performance on AP exams is the percentage of exams with a score of 3 or higher.

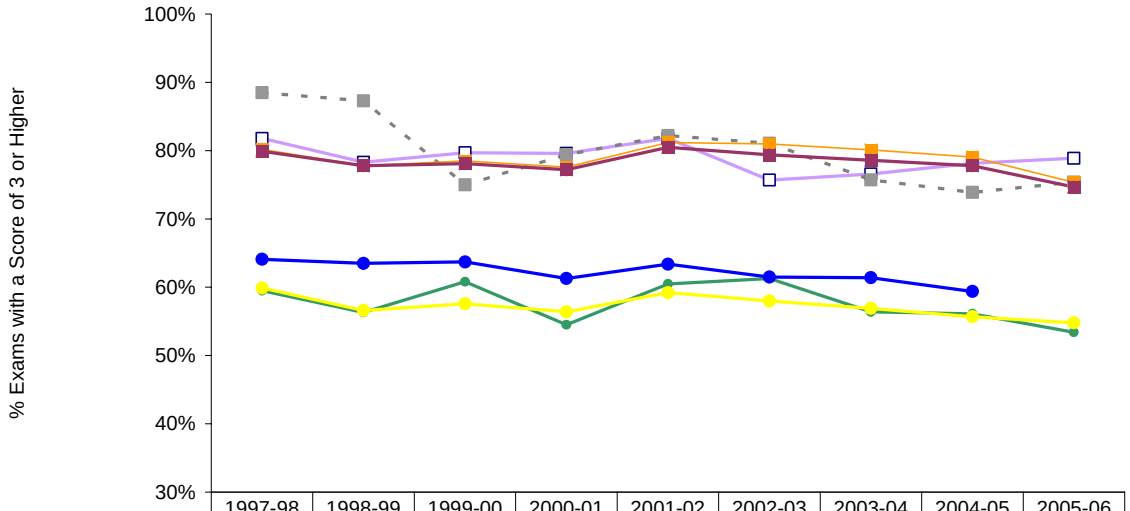
Over the past several years, the percentage of WCPSS AP exam scores of 3 or higher has declined slightly (Figure 22). This trend could be a function of a wider pool of students taking AP exams over time. It could also be due to the fact that new AP exams have been introduced over the years such that the number and type of exams available to students has increased over time. As passing rates are not the same across different tests, if the tests that have been introduced over the last decade are more or less difficult that those which had already been in existence, that will also affect trends in passing rates. Therefore, any trend information on overall AP exam performance should be interpreted cautiously.

Figure 22
Percent of WCPSS AP Exam Scores of 3 or Higher, 1997-2006



The small decline in the percentage of scores of 3 or above on AP exams in WCPSS is also evident across ethnic subgroups (Figure 23). The decline is most evident among Hispanic/Latino students; however, since the number of AP test takers in the Hispanic/Latino subgroup is relatively small, those numbers will tend to fluctuate more from year to year than for other subgroups that are larger in number. Therefore, it is debatable as to whether there is a substantive difference in the trends between any ethnic subgroups.

Figure 23
AP Exam Performance by Ethnicity, 1998-2006

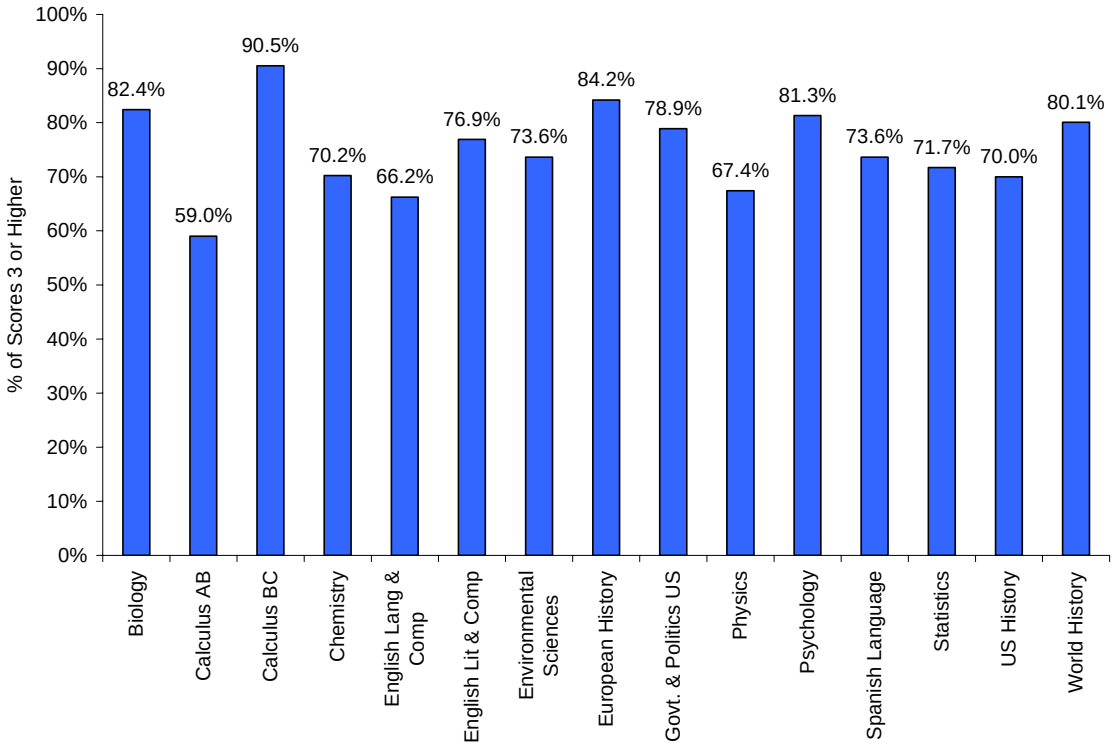


	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Asian	81.8%	78.3%	79.7%	79.6%	81.8%	75.7%	76.6%	78.2%	78.9%
Black	59.5%	56.3%	60.8%	54.5%	60.5%	61.3%	56.4%	56.1%	53.4%
Hispanic/Latino	88.5%	87.3%	75.0%	79.4%	82.2%	81.1%	75.7%	73.9%	75.4%
White	80.2%	77.8%	78.5%	77.6%	81.2%	81.0%	80.1%	79.1%	75.4%
WCPSS	79.9%	77.8%	78.1%	77.2%	80.5%	79.4%	78.6%	77.8%	74.7%
NC	59.9%	56.6%	57.6%	56.4%	59.2%	58.0%	56.9%	55.7%	54.8%
US	64.1%	63.5%	63.7%	61.3%	63.4%	61.5%	61.4%	59.4%	

Note: US results were not available for 2005-06 at the time this report was printed.

AP exam performance also varies by course, see Figure 23. Differences in relative difficulty of tests, as well as differences in the proportion of students who actually decide to take the exam are two factors that likely contribute to the difference in performance across tests. Among the 15 most commonly taken AP exams in 2005-06, the highest passing rates were in Calculus BC, European History, and Psychology. Historically, passing rates across individual exams have fluctuated from year to year (Wake County Public Schools, 2005-06).

Figure 24
AP Exam Performance by Course, 2005-06



HIGH SCHOOL END-OF-COURSE (EOC) RESULTS

The North Carolina Department of Public Instruction (NCDPI) requires that all schools administer multiple-choice End-of-Course (EOC) tests to students enrolled in ten courses usually taken in high school. The tests are aligned with the Standard Course of Study in each of the subjects tested (Algebra I, Algebra II, Geometry, English I, Biology, Chemistry, Physical Science, Physics, U. S. History and Civics & Economics) and use a multiple-choice format. EOC tests in U. S. History and Civics & Economics were given for the first time in 2005-06. Under the state's ABCs of Public Education accountability program, EOC tests must be given during the last two weeks of the course. Results are then used for state accountability programs.

Student performance on EOC multiple-choice tests is measured by both a scale score and an achievement level. There are four broad achievement levels, each representing a different level of competency in a subject area (Table 8). Table 9 shows the range of scale scores associated with each achievement level for each of the eight EOC tests administered in 2005-06.

While most EOC tests are taken by students in grades 9-12, a growing number of middle school students are taking higher-level mathematics courses prior to enrolling in high school in recent years. Due to this trend, some students may take Algebra I, Geometry, or even Algebra II tests in middle school. The results reported in this section contain test results for students in grades 9-12 only unless otherwise specified.

Table 8
Basic Description of Achievement Levels for the North Carolina Testing Program

Level I: Students performing at this level do not have sufficient mastery of knowledge and skills of the course to be successful at a more advanced level in the content area.	**Level III:** Students performing at this level consistently demonstrate mastery of the course subject matter and skills and are well prepared for a more advanced level in the content area.
Level II: Students performing at this level demonstrate inconsistent mastery of knowledge and skills of the course, and are minimally prepared to be successful at a more advanced level in the content area.	**Level IV:** Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient in the course subject matter and skills and are very well prepared for a more advanced level in the content area.

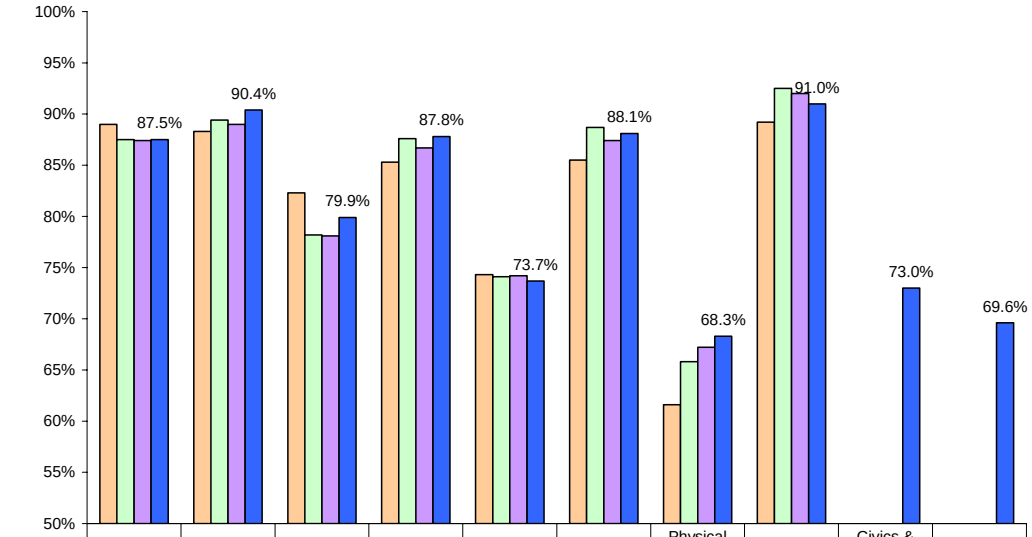
Note: Official descriptions actually vary by course and are listed in NC State Board of Education Policy HSP-C-010 (http://sbepolicy.dpi.state.nc.us/policies/HSP-C-010.asp?pri=01&cat=C&pol=010&acr=HSP).

Table 9
EOC Achievement Levels by Scale Score Ranges, 2005-06

	Level I	Level II	Level III	Level IV
Algebra I	31-44	45-54	55-65	66-96
Algebra II	33-45	46-57	58-68	69-102
Biology	28-46	47-54	55-64	65-85
Chemistry	31-47	48-55	56-64	65-90
English I	28-42	43-51	52-60	61-82
Geometry	32-45	46-56	57-66	67-93
Physics	23-42	43-51	52-62	63-91
Physical Science	30-43	44-53	54-63	64-86
U. S. History	Up to 139	140-149	150-159	160 and up
Civics & Economics	Up to 139	140-148	149-158	159 and up

Historically, proficiency rates on EOC tests have varied by course, both in WCPSS and across the state. The highest proficiency rates have traditionally been found in Algebra I, English I, Physics, Algebra II, and Chemistry. Over the past four years, the percentage of students scoring proficient on the tests that have been given consistently during that span has increased in five out of eight subjects (Figure 25). English I, Geometry, and Biology were the only tests to show a drop in performance during that span.

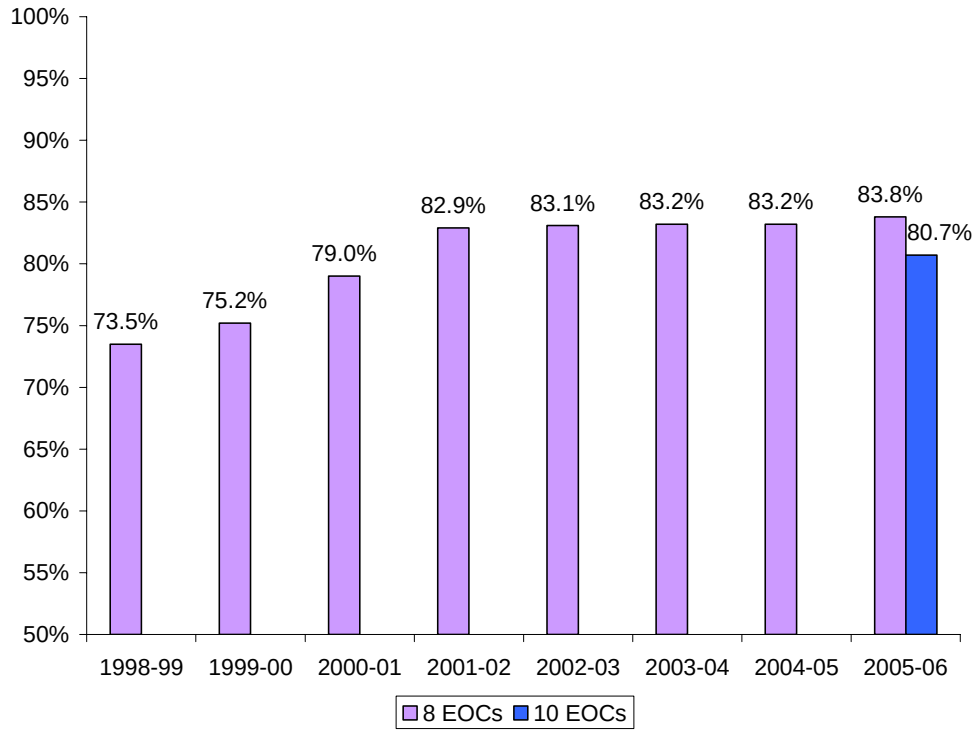
Figure 25
WCPSS End-of-Course (EOC) Proficiency Rates, 2003-2006



	English I	Algebra I	Geometry	Algebra II	Biology	Chemistry	Physical Science	Physics	Civics & Economics	U.S.History
2002-03	89.0%	88.3%	82.3%	85.3%	74.3%	85.5%	61.6%	89.2%		
2003-04	87.5%	89.4%	78.2%	87.6%	74.1%	88.7%	65.8%	92.5%		
2004-05	87.4%	89.0%	78.1%	86.7%	74.2%	87.4%	67.2%	92.0%		
2005-06	87.5%	90.4%	79.9%	87.8%	73.7%	88.1%	68.3%	91.0%	73.0%	69.6%

Combining proficiency results across all EOC tests is one way to gauge overall performance at the high school level. Performance across the eight EOC tests given each year since 1998-99 rose sharply in WCPSS up through 2001-02, leveled off through 2004-05, and then ticked slightly upward again in 2005-06 to nearly 84% (Figure 26). When the two new EOC tests given in 2005-06 are included, this composite proficiency rate drops to 80.7%.

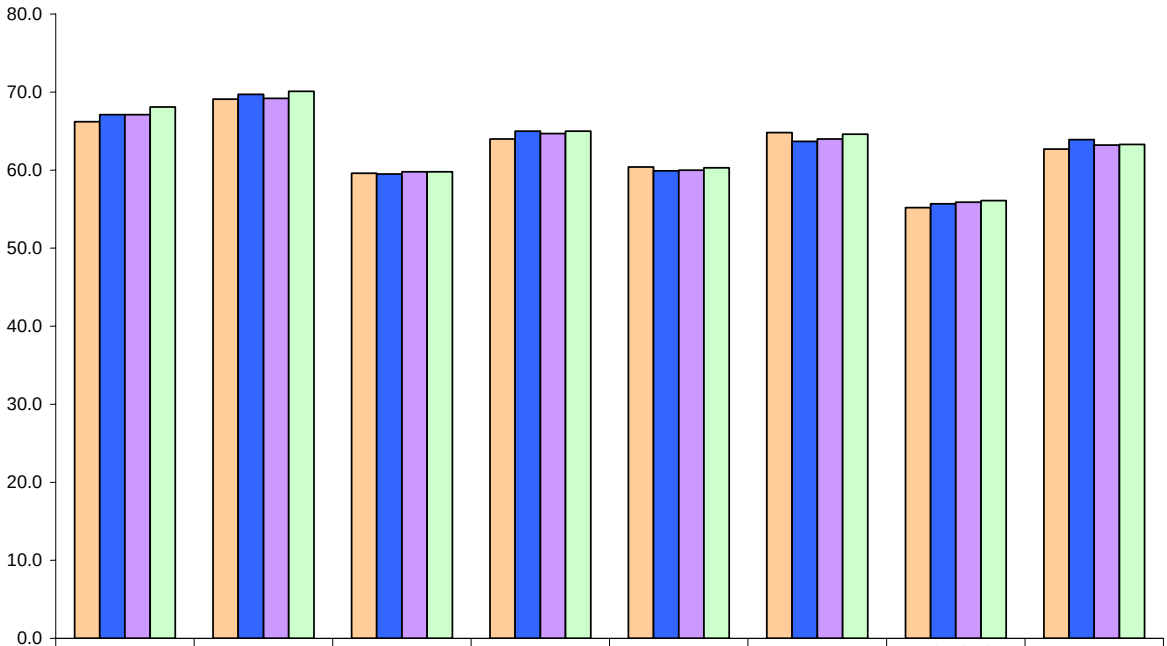
Figure 26
WCPSS Composite EOC Proficiency Across All Tests, 1999-2006



Note: U.S. History and Civics and Economics are not included prior to 2005-06 as those tests were new that year.

In addition to looking at the percentage of students who score proficient on EOC tests, monitoring the change in the average test score is another useful metric for assessing progress. Unlike the proficiency calculations in the aforementioned charts, average scale score calculations capture the movements both above and below the proficiency cut point. Across the eight EOC tests given consistently since 2002-03, the average scale score has increased slightly in five of the eight subjects (Algebra I, Algebra II, Chemistry, Physical Science, and Physics), and remained basically flat in the other four (Figure 27). The largest increase is found in Algebra I (1.9 points).

Figure 27
WCPSS End-of-Course (EOC) Average Scale Scores, 2003-2006

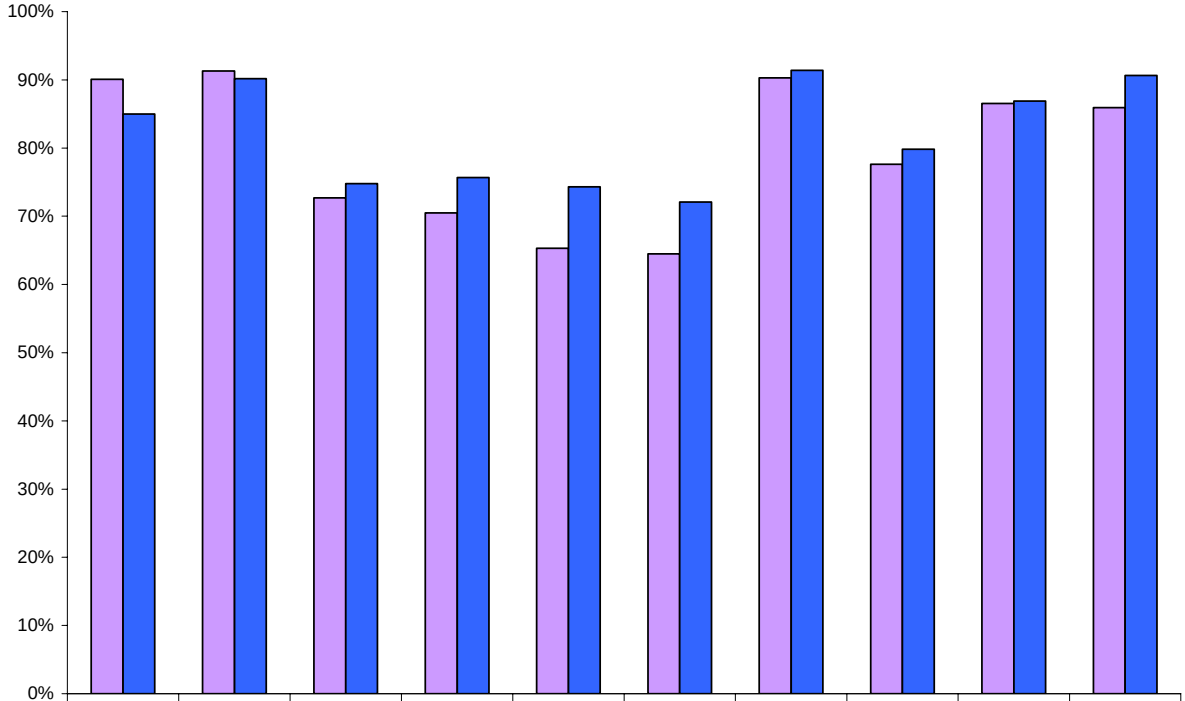


	Algebra I	Algebra II	Biology	Chemistry	English I	Geometry	Physical Science	Physics
2002-03	66.2	69.1	59.6	64.0	60.4	64.8	55.2	62.7
2003-04	67.1	69.7	59.5	65.0	59.9	63.7	55.7	63.9
2004-05	67.1	69.2	59.8	64.7	60.0	64.0	55.9	63.2
2005-06	68.1	70.1	59.8	65.0	60.3	64.6	56.1	63.3

EOC Results By Gender

When looking separately at EOC proficiency results for male and female students, some interesting patterns appear. In particular, male students outperformed females in 2005-06 on every EOC test except Algebra I and English I (Figure 28). The largest gaps are in US History (9 percentage points) and Physical Science (7.6), while the largest advantage for female students was in English I (5.1).

Figure 28
EOC Proficiency by Test and Gender, 2005-06



	English I	Algebra I	Biology	Civics & Economics	U.S.History	Physical Science	Physics	Geometry	Algebra II	Chemistry
Female	90.1%	91.3%	72.7%	70.5%	65.3%	64.5%	90.3%	77.6%	86.5%	85.9%
Male	85.0%	90.2%	74.8%	75.7%	74.3%	72.1%	91.4%	79.8%	86.9%	90.6%

EOC Results By NCLB Subgroups

With the advent of the No Child Left Behind Act of 2001 and the subsequent retooling of the state's testing and accountability system, the performance of other student subgroups have been a larger focus. Through the Adequate Yearly Progress mechanism of that law, schools are now held directly responsible for the performance of not just the school as a whole, but also for the performance of students in various ethnic groups as well as students with disabilities (SWD), students eligible for free or reduced-price lunch (FRL), and students with limited English proficiency (LEP). Therefore, analysis of EOC results of these various subgroups of students gives a finer-grained picture of school performance beyond those presented above.

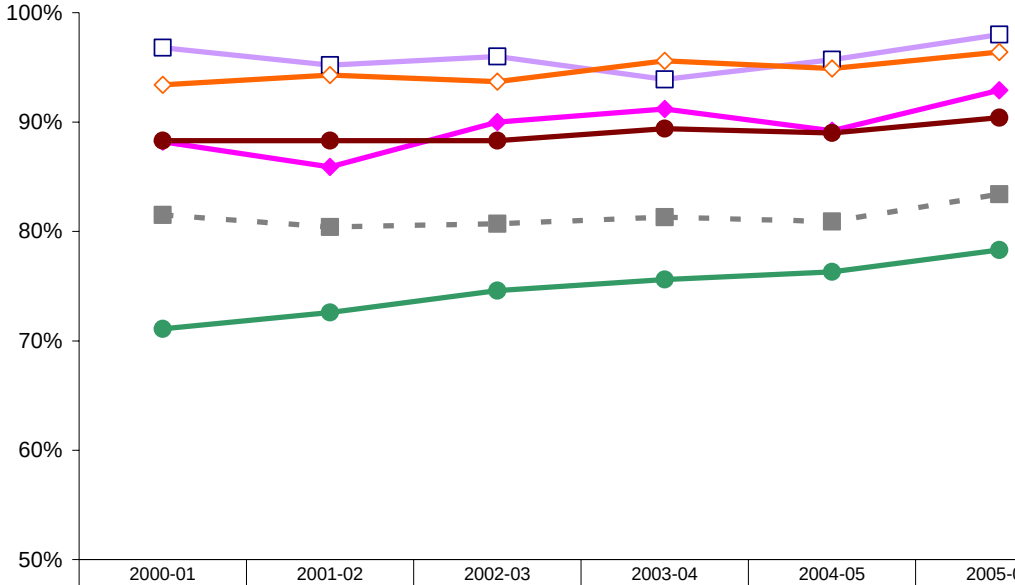
In addition to being differentiated by subject area, EOC tests are also sometimes categorized as either "core" or "elective". The five core EOCs – Algebra I, English I, Biology, U. S. History, and Civics & Economics – are taken by the vast majority of high school students. Beginning with the incoming 9th grade class of 2006-07, students statewide will have to meet proficiency requirements on each of those five tests in order to graduate from high school. The remaining five EOCs – Algebra II, Geometry, Physical Science, Chemistry, and Physics – can be thought of as elective EOCs because those courses are not explicitly required for graduation, and therefore not all students will take them.

The following charts (Figures 29-32) provide a breakdown of EOC performance by ethnicity for the five core EOC tests over the past several years. Data for certain subgroups and certain tests must be interpreted carefully due to small numbers of test takers. Results for Multiracial and American Indian students in particular are based on small numbers of students for most tests, and therefore are likely to fluctuate more dramatically from year to year.

Algebra I

Proficiency percentages for Algebra I show a steady pattern of improvement for all ethnic groups over the past several years (Figure 29). Overall increases between 2000-01 and 2005-06 were largest for Black/African American students (a 7.2 percentage point increase), followed by Multiracial (4.7 points) and White students (3 points). Between 2004-05 and 2005-06, scores for all groups ticked upward after being largely flat between 2003-04 and 2004-05.

Figure 29
Algebra I Proficiency by Ethnicity, 2001-2006

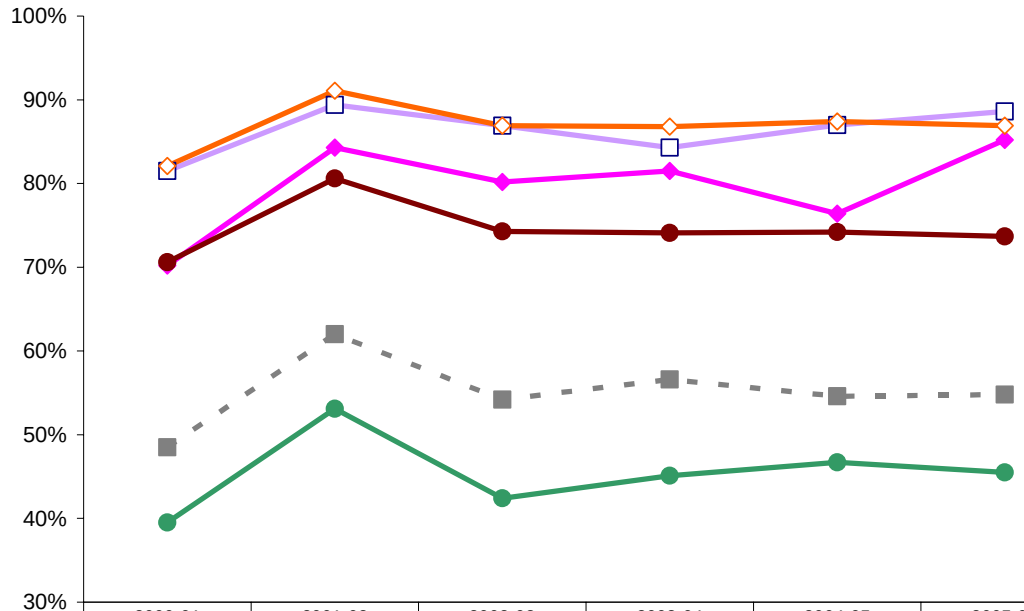


	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Asian	96.8%	95.2%	96.0%	93.9%	95.7%	98.0%
Black	71.1%	72.6%	74.6%	75.6%	76.3%	78.3%
Hispanic/Latino	81.5%	80.4%	80.7%	81.3%	80.9%	83.4%
Multi-racial	88.2%	85.9%	90.0%	91.2%	89.2%	92.9%
White	93.4%	94.3%	93.7%	95.6%	94.9%	96.4%
All Students	88.3%	88.3%	88.3%	89.4%	89.0%	90.4%

Biology

As with Algebra I, between 2000-01 and 2005-06, the percentages of students scoring proficient in Biology increased for every ethnic group (Figure 30). The largest increases were among Multiracial students (15 percentage points), Asian students (7.1 points), and Hispanic/Latino students (6.3 points). Despite these increases, proficiency rates for both Black/African American and Hispanic/Latino students in 2005-06 remain relatively low, compared to other ethnic groups and compared to other EOC tests. Biology in recent years has been the subject with the largest proficiency gaps between ethnic groups among all of the EOCs.

Figure 30
Biology Proficiency by Ethnicity, 2001-2006

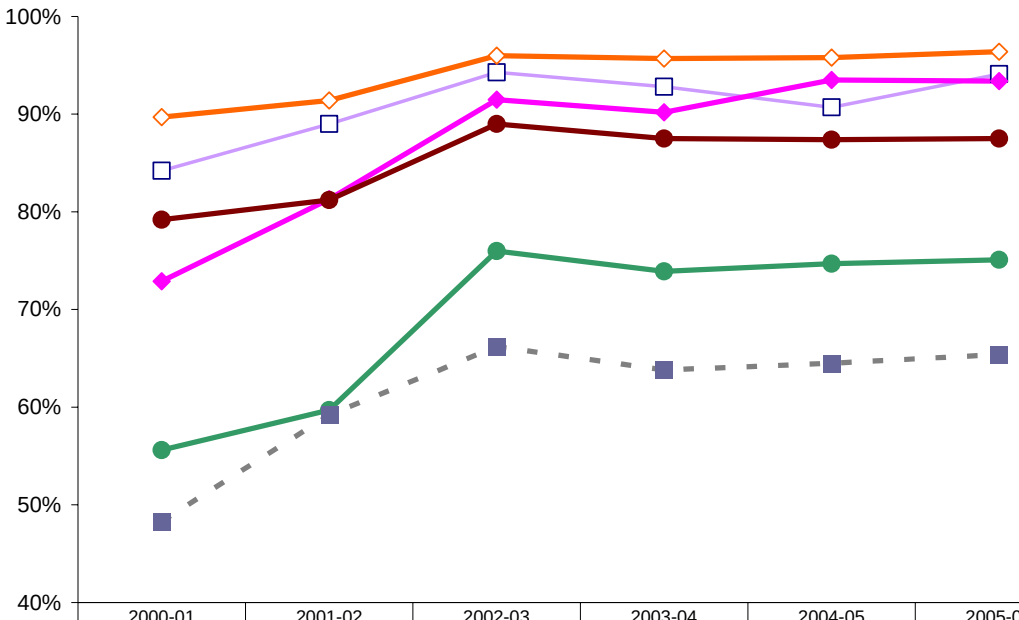


	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Asian	81.5%	89.4%	86.9%	84.3%	87.0%	88.6%
Black	39.5%	53.1%	42.4%	45.1%	46.7%	45.5%
Hispanic/Latino	48.5%	62.0%	54.2%	56.6%	54.6%	54.8%
Multi-racial	70.2%	84.3%	80.2%	81.5%	76.4%	85.2%
White	82.1%	91.1%	86.9%	86.8%	87.4%	86.9%
All Students	70.6%	80.6%	74.3%	74.1%	74.2%	73.7%

English I

Proficiency rates for English I show a steady pattern of improvement for most ethnic groups as well (Figure 31). Increases between 2000-01 and 2005-06 were largest for Multiracial students (20.5 percentage points), Black/African American students (19.5 percentage points), and Hispanic/Latino students (17.1 percentage points). Among the core EOCs, English I shows the largest gains for different ethnic groups as well as the most significant closing of the performance gap between White and other students during the past five years.

Figure 31
English I Proficiency by Ethnicity, 2001-2006

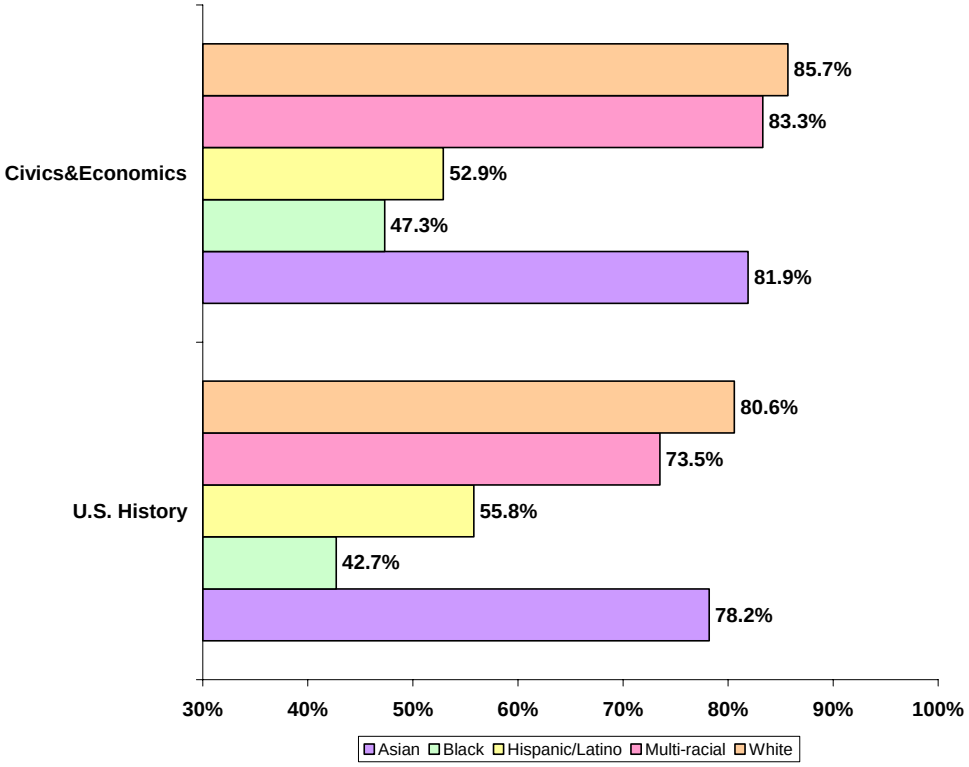


	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Asian	84.2%	89.0%	94.3%	92.8%	90.7%	94.1%
Black	55.6%	59.7%	76.0%	73.9%	74.7%	75.1%
Hispanic/Latino	48.3%	59.2%	66.2%	63.8%	64.5%	65.4%
Multi-racial	72.9%	81.3%	91.5%	90.2%	93.5%	93.4%
White	89.7%	91.4%	96.0%	95.7%	95.8%	96.4%
All Students	79.2%	81.2%	89.0%	87.5%	87.4%	87.5%

U S. History and Civics & Economics

The two core EOCs that were introduced in 2005-06 show not only some of the lowest proficiency rates across EOCs (Figure 32), but also some of the larger achievement gaps between ethnic groups. The proficiency gap between White and Black/African-American students on the U. S. History and Civics and Economics EOCs in 2005-06 were 37.8 and 32.8 percentage points, respectively.

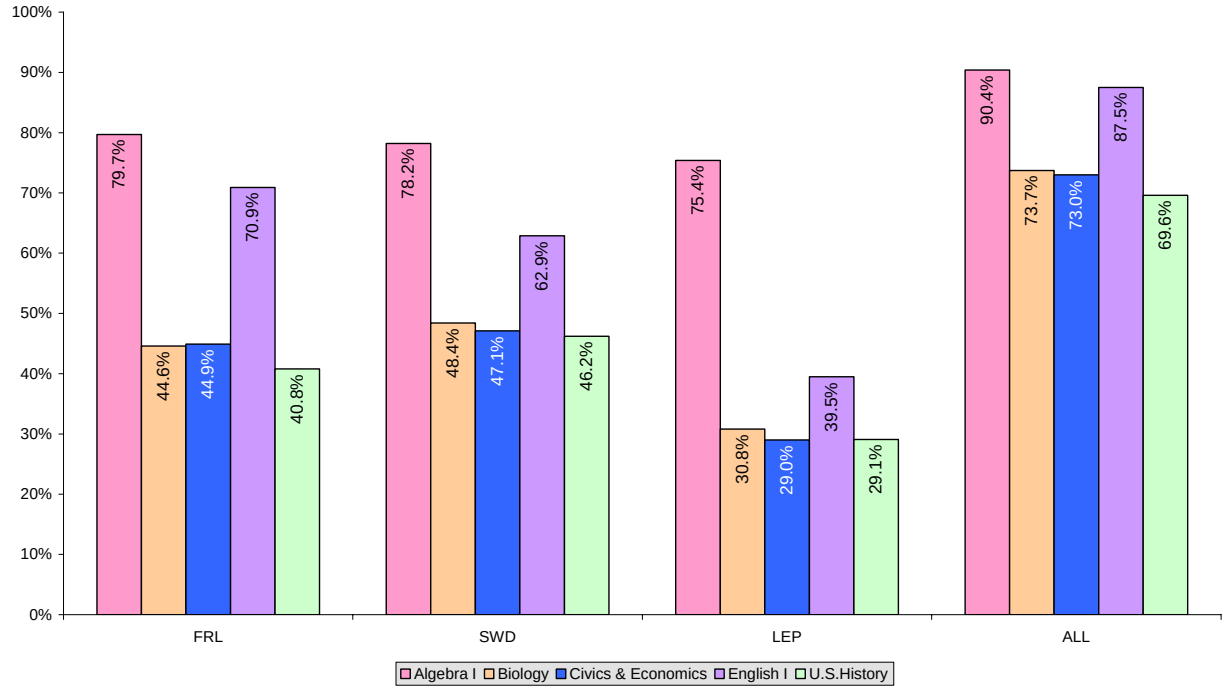
Figure 32
U. S. History and Civics & Economics Proficiency by Ethnicity, 2006



Performance of SWD, FRL and LEP Students

Historically, performance of SWD, FRL and LEP students on standardized educational tests of any kind has largely lagged behind the performance of students who are not classified as such. On the five core EOC tests administered in WCPSS in 2005-06, this pattern is evident (Figure 33). Across all five tests, the performance of SWD, FRL, and LEP students in terms of the percentage of students scoring proficient lagged behind the systemwide percentage in each case. The smallest gaps are seen in Algebra I (roughly 11-15 percentage points difference), while the largest are in Biology, U. S. History, and Civics and Economics. This pattern is reminiscent of the gaps by ethnicity reported earlier. The performance gap between LEP students and the system as a whole is also relatively large in English I (38 percentage points).

Figure 33
Performance of Selected Subgroups on the Five Required EOC Tests, 2006

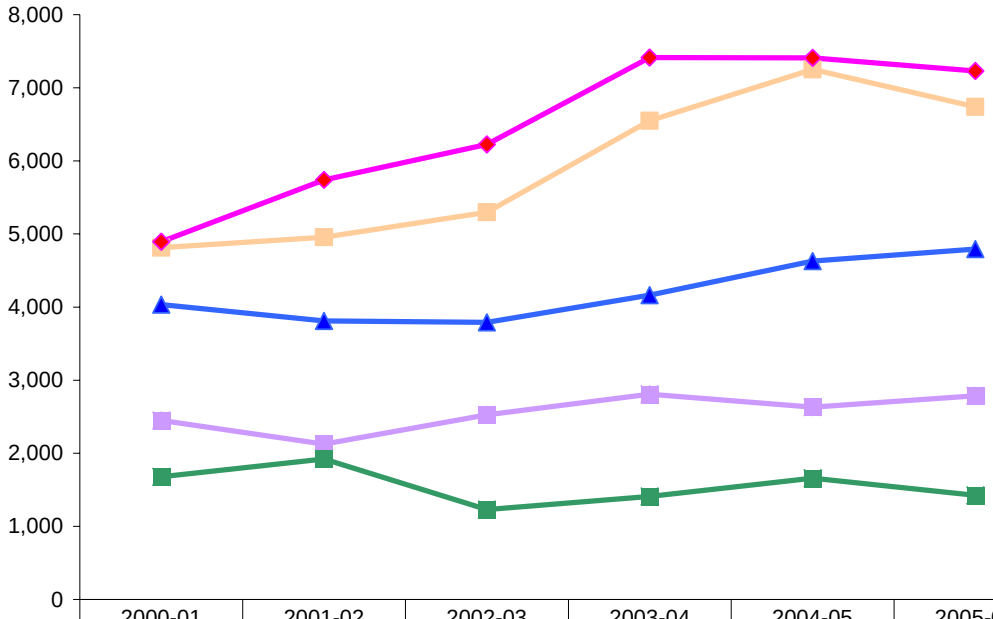


CONTEXTUAL FACTORS

When taking stock of EOC test performance, several factors need to be considered in order to put those results in context. While the five core EOCs are taken by the vast majority of high school students, the elective EOCs are taken by a less representative population of students. Higher-level math and science EOCs are less likely to include students who struggle academically, as they are not as likely to enroll in those courses in the first place, particularly Physics. On the other hand, those students are more likely than others to enroll in Physical Science. Therefore, the performance of students on those elective EOC tests is not always representative of the entire high school population.

When examining performance on elective EOC tests, trends in scores will also be affected by changes over time in the number and nature of the students who choose to enroll in those courses. Figure 34 displays the number of tests given over the past several years in each of those five areas, which can be considered a proxy for course enrollment. Over that time span, the number of students taking Geometry, Algebra II, and Chemistry has increased, while the number of students in the other courses has remained largely flat. When overall growth in enrollment is taken into consideration (see the Demographic Trends section of this report), however, only Algebra II has seen increases that have kept pace with enrollment growth. Therefore the nature of the population of students in these courses may be changing over time.

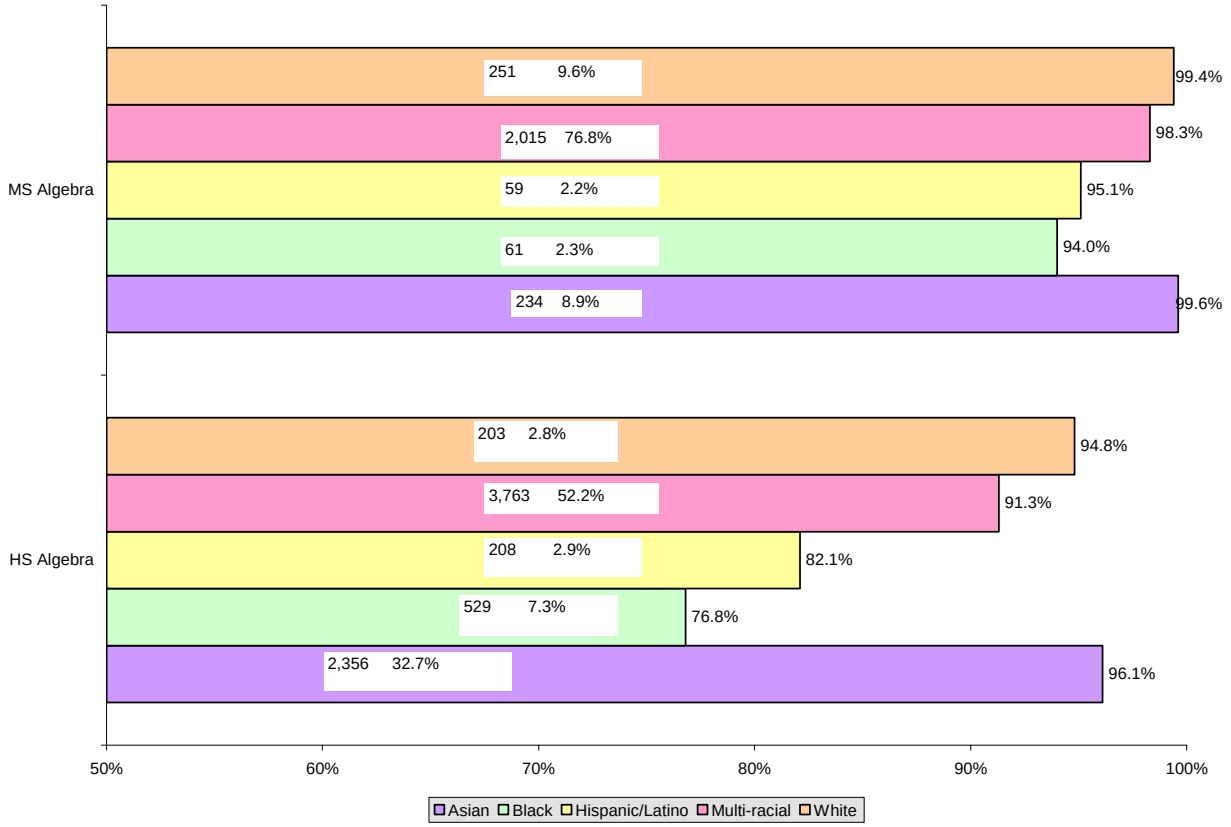
Figure 34
Participation in Elective EOC Tests, 2001-2006



	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Algebra II	4,814	4,956	5,296	6,548	7,251	6,741
Chemistry	4,034	3,811	3,792	4,162	4,630	4,795
Geometry	4,892	5,741	6,225	7,412	7,409	7,231
Physical Science	2,449	2,125	2,525	2,808	2,632	2,785
Physics	1,680	1,922	1,231	1,409	1,657	1,426

Algebra I performance is also affected by contextual factors due to the fact that students may take Algebra I as early as 6th grade, or as late as 12th grade. Since the EOC results in this report are strictly for students in grades 9-12, scores for students who take Algebra I in middle school (approximately 20-25% of all students in a given year) are not included. As shown in Figure 35, the performance profile of those students is very different from those who wait until high school to take Algebra. As more and more students take Algebra in middle school, it is likely that the performance of high school students as a group may decline, as the more academically advanced students are the ones who are taking Algebra in middle school.

Figure 35
Algebra I Proficiency by Ethnicity and Grade Span, 2006



In general, the performance of WCPSS students on EOC tests in recent years shows many positive trends. However, large achievement gaps between student subgroups still exist on many EOC tests, and in some cases they show few signs of closing. In the coming years, monitoring performance on the five core EOCs that are now required for graduation (beginning with first-time 9th graders in 2006-07) in particular will become critical in terms of the potential impact on graduation rates.

The 2006-07 and 2007-08 school years will also witness a resetting of achievement standards on eight of the ten EOC tests, the effects of which are yet to be known. However, past examples of standard setting on new or revised state tests (e.g., End-of-Grade math tests in 2005-06 for elementary and middle schools) suggest that a drop in proficiency rates is very likely across those eight EOCs. Future versions of this report will examine those potential changes.

GRADE 10 WRITING ASSESSMENT

North Carolina began its statewide writing assessment in the 1983-84 school year with tests administered to students in grades 6 and 9. From the beginning, the North Carolina Writing Assessment emphasized student composition skills, and scoring rubrics were designed to holistically assess students' abilities to create good written compositions in standardized single-session testing environments. In 1995-96, testing shifted to grades 4, 7, and 10. In 2001 the North Carolina Department of Public Instruction (NCDPI) staff began a process that resulted in new writing assessments and scoring procedures for grades 4, 7, and 10. The new procedures were approved by the State Board of Education (SBE) on January 9, 2003, and statewide pilot testing occurred in March 2003.

A new scoring system was implemented statewide in 2003-04. Possible scores ranged from 4-20, and scores were organized into Levels I, II, III, and IV. As described in the following section, the scoring model currently being used is significantly different from the model used prior to 2003 and therefore, comparisons to previous years are inappropriate.

NC Writing Assessment Scoring Procedures

New administration and scoring procedures for the writing assessment went into effect during the 2002-2003 school year. As in previous years, the essays were scored by two individual readers who evaluated both content and conventions (sentence formation, usage, and mechanics). Each reader gave a content score from 1 to 4 or a no score (NS) for essays that were off topic and could not be evaluated. Content scores were based on specified characteristics including focus, organization, support and elaboration, and style. A conventions score ranging from 0 to 2 was also given by each reader.

The major change in scoring procedures incorporated the conventions score into the total writing score for each student. The total writing score is computed by combining the content scores and the conventions scores from both scorers using the following equation:

> The Total Writing Score = (the sum of the content scores from the two independent readers multiplied by 2) plus (the sum of the conventions scores from the two readers).

For example, the first reader might give an essay a content score of 3 and a conventions score of 1. The second reader might give the same essay a content score of 2 and a conventions score of 1. Using the formula, add the content scores together and multiply the sum by 2, resulting in 10 points for content. Adding the conventions scores generates a final total score of 12. The new scoring method results in student scores ranging from a low of 4 (in a case where both readers gave content scores of 1 and conventions scores of 0) to a high of 20 (where both content scores are 4 and both conventions scores are 2).

As is true for most other NC state tests, total scores from the writing test are organized into four achievement levels (I, II, III, and IV). The level definitions are similar to those used for End-of-Grade (EOG) and End-of-Course (EOC) testing. Level I scores are considered far below grade

level, Level II slightly below grade level, Level III at grade level, and Level IV well above grade level (Table 10). Prior to 2003, conventions ratings were not part of the total writing score, and the content scores of two readers were averaged, resulting in final scores ranging from 1.0 to 4.0.

Table 10
Writing Test Total Score Ranges By Level, 2005-06

Level I	4-7
Level II	8-11
Level III	12-16
Level IV	17-20

Types of Writing

Writing scores tend to fluctuate from year to year based upon the type of writing and subject matter of the prompt. Figure 36 shows the prompts utilized by NCDPI for the 2005-06 writing assessments. Based upon the recommendations of the NC Writing Assessment Task Force and the State Board of Education Ad Hoc Writing Committee, the Grade 4 prompt is currently in the form of a personal narrative or imaginative narrative. The Grade 7 prompt requires an extended argumentative response, and the Grade 10 prompt asks students for an extended informational response either in the form of a definition or a cause/effect.

Figure 36
10th Grade Writing Prompt Used in the 2005-06 School Year

Write a letter to your local school board explaining the effects of a "no-pass, no-play" policy on the students in your school. You may use the following information, your own experience, observations, and/or readings.

"No-pass, no-play," of course, is the popular slogan for a policy that requires students to maintain passing grades in their core academic subjects to be eligible to participate in a school's extracurricular activities. The slogan lumps together student athletes and all other students who represent the school in interschool competitions, from members of the drill team and pep squad to contestants in drama and chess…

Recent public debate about the "no-pass, no-play" policy, especially in the legislature and the media, proceeded without the reliable evidence about the effect of the policy on individual students, in individual schools, and in schools across the state…
Source: O.L. Davis Jr.Editor, Journal of Curriculum and Supervision

In 1984, "Texas became the first state to impose academic eligibility requirements to participate in athletics. Since then nearly thirty states have established similar academic minimums, with many expanding the scope to include student participation in all extracurricular activities."
Source: National Association of State Boards of Education

"Educational decision makers must look at the consequences of denying students the right to participate to get them to work harder in the classroom…These kinds of exclusionary policies may well damage overall achievement and work against those students who could benefit most directly from involvement."
Source: John Holloway, "Extracurricular Activities: The Path to Academic Success?"

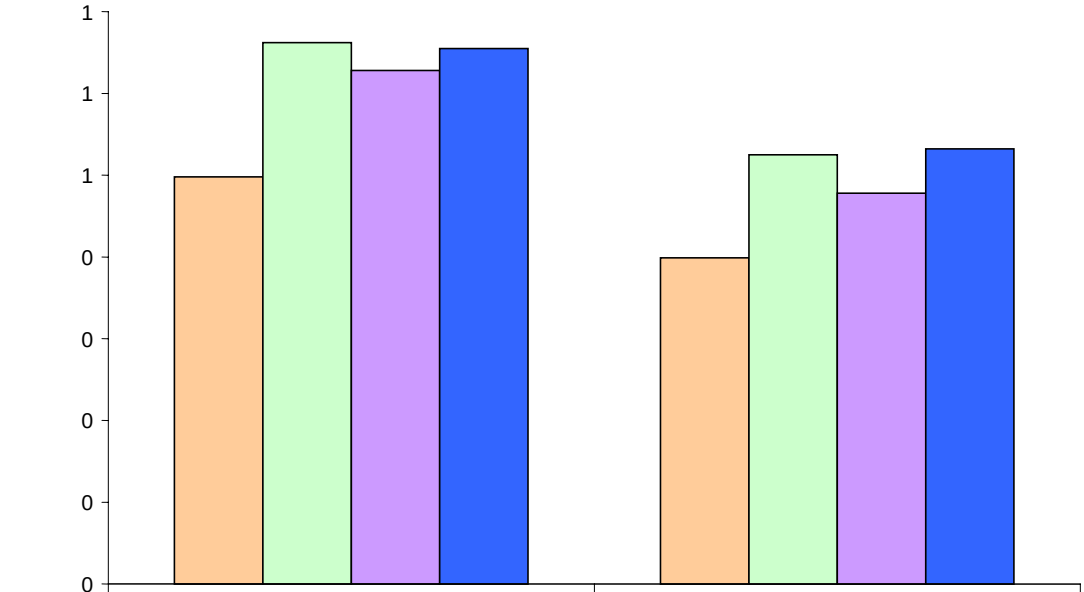
Note: Adapted from https://www.rep.dpi.state.nc.us/prelimwrite0506.pdf.

Writing assessment results should be interpreted carefully, as each year the specific prompts change. While comparisons of the percentages of students at each achievement level can be made to previous years, it must be remembered that the scores associated with each achievement level were generated through different processes and using different prompts across years.

Results

Over the past four years, the percentage of WCPSS 10th graders scoring proficient on the Grade 10 Writing Test has been 10-15 percentage points higher than the statewide rate (Figure 37). Despite this, no more than two-thirds of WCPSS students have scored proficient since 2003 in any one year. With respect to changes over time, both WCPSS and the state as a whole saw a significant jump in proficiency between 2002-03 and 2003-04. Since then, however, scores have remained largely unchanged for both groups.

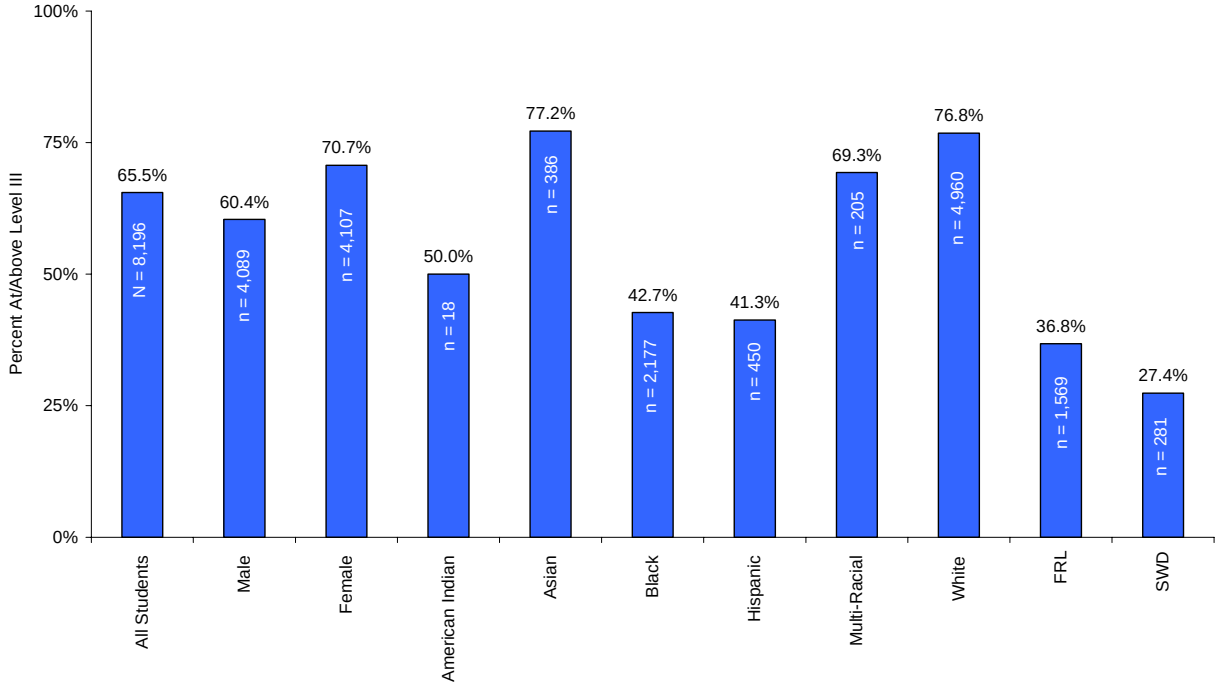
Figure 37
WCPSS Grade 10 Writing Test Proficiency Results, 2003-2006



	WCPSS Gr 10	NC Gr 10
2002-03	49.8%	39.9%
2003-04	66.2%	52.5%
2004-05	62.8%	47.8%
2005-06	65.5%	53.2%

With respect to student subgroup performance in WCPSS, the same general patterns evident on EOC tests are seen on the Writing Test as well. White and Asian students were more likely to score proficient than students in other ethnic groups in 2005-06. Female students also fared better than male students, which mimics results seen on the English I EOC. In addition, students eligible for free or reduced-price lunch (FRL) and students with disabilities (SWD) scored proficient at a much lower rate than their peers.

Figure 38
WCPSS Grade 10 Writing Assessment Proficiency Results by Subgroup, 2003-2006



Note: As reported by NCDPI in July 2006. Results for LEP students as a separate subgroup were not available.

Compared to other standardized tests administered at the high school level, although the pattern of performance across subgroups mirrors that of many EOC and other tests, the percentage of students scoring proficient on the 10th Grade Writing Test remains relatively low. However, this is in part a function of the test itself, as the statewide results are also lower than for EOC tests. The demands of the test, as well as idiosyncrasies related to the choice of prompts from year to year and the scoring methodology make interpretation of Writing Test results more difficult than for many other tests at the high school level.

VoCATS

VoCATS is an instructional management system used for planning instruction, assessing and documenting student achievement, and also for providing accountability data for North Carolina Career and Technical Education (CTE) programs. The VoCATS system has been recognized by the U. S. Department of Education as a national instructional model and by the Rand Corporation as an exemplary statewide system to assess student learning.

VoCATS post-assessments are essentially end-of-course tests for CTE courses, and are provided by North Carolina Department of Public Instruction. These tests are generated from accountability assessment item-banks that have gone through a strenuous validation process. VoCATS post-assessments generally consist of 100 multiple-choice items that are selected by course objective, with the number of items from each objective determined by the weight that objective is assigned on the course blueprint.

Results of VoCATS post-assessments are reported as the percentage of items answered correctly, and are categorized into four proficiency levels. These levels are: Level I = 44 percent or below, Level II = 45 – 64 percent, Level III = 65 – 81 percent and Level IV = 82 – 100 percent. Scoring Level III or higher indicates that a CTE student has met the statewide performance standard. Results are reported by class, school, and course at the local, regional, and state levels and are used to measure how well students in North Carolina Career and Technical Education courses are meeting statewide performance standards. More information on the North Carolina VoCATS program can be found at http://www.ncpublicschools.org/workforce_development/vocats/index.html .

In 2005-06, WCPSS administered VoCATS post-assessesments for 99 different CTE courses within eight program areas: agricultural education, business and information technology education, career development, family and consumer sciences education, health occupations education, marketing education, technology education, and trade and industrial education.

Since 2000-01, the percentage of students scoring at or above Level III across all VoCATS tests has increased significantly from just over 52% to nearly 69% (Figure 39). Passing rates across the eight program areas range from 60.4% to 75% (Table 11). In each program area, 2005-06 proficiency rates for WCPSS students were higher than for the state as a whole in every area except health occupations education. Differences in passing rates across tests, however, are not indicative of more or less success, as the number, type, and difficulty of each of the VoCATS tests are not necessarily equal.

Figure 39
Overall WCPSS VoCATS Test Performance, 2001-2006

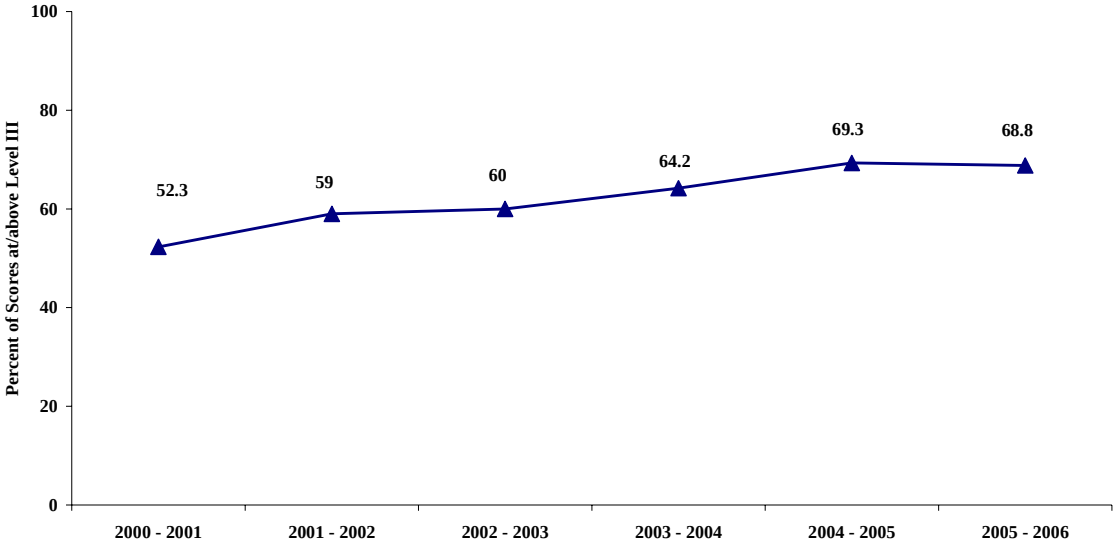


Table 11
VoCATS Test Performance by Program Area, 2005-06

	Achievement Level					WCPSS	State
Program Area	**I**	**II**	**III**	**IV**	**Total # Tests**	**% III/IV**	**% III/IV**
Agricultural Education	51	118	269	237	675	75.0%	71.8%
Business/IT Education	532	2,508	4,571	1,539	9,150	66.8%	61.0%
Career Development Education	45	137	234	151	567	67.9%	64.2%
Family/Consumer Sci. Educ.	302	1,367	2,577	2,605	6,871	75.4%	71.0%
Health Occupations Education	48	351	656	485	1,557	73.3%	75.3%
Marketing Education	126	715	1,486	506	2,833	70.3%	56.2%
Technology Education	137	389	577	225	1,328	60.4%	48.4%
Trade and Industrial Education	402	1,635	2,392	1,160	5,589	63.6%	56.2%
TOTAL	**1,643**	**7,220**	**1,2762**	**6,908**	**28,570**	**68.8%**	**63.9%**

Across all program areas except Health Occupations Education, VoCATS proficiency rates for WCPSS high school students are above the statewide rates. Analysis of 2006-07 data will reveal whether the general upward trend across the past six years continues.

OTHER STUDENT OUTCOMES

HIGH SCHOOL GRADUATION RATE

The No Child Left Behind Act of 2001 requires schools that graduate 12th grade students to report a graduation rate as part of the measurement of Adequate Yearly Progress (see the AYP section of this report for more details). Until 2005-06, the available data systems across the state were not capable of producing a true "four-year" cohort graduation rate as per the intentions of the legislation. Loosely defined, a four-year cohort graduation rate answers the question "Of the 9th grader students who start school in a particular year, how many of them receive a high school diploma four years later?"

Although a seemingly simple question on the surface, the state's data systems were unable to produce such a rate until 2005-06 due to the many complicated details behind capturing and reporting that type of information. Prior to 2005-06, the state had relied primarily on a less desirable method referred to as an "on-time" graduation rate for calculating and reporting graduation rates for AYP purposes. This measurement answered the alternative question "Of the students who graduated in a particular year, how many of them did so in four years or less?"

Beginning with the 2006-07 school year, the change in the new four-year cohort rate will be used as the metric for AYP graduation rates for any North Carolina high school that graduates seniors. The 2005-06 four-year cohort rate – the baseline for the measurement of that change – is being reported for schools, districts, and the state as a whole for the first time via the 2005-06 NC School Report Cards which are produced by NCDPI and the Governor's Office (http://www.ncreportcards.com).

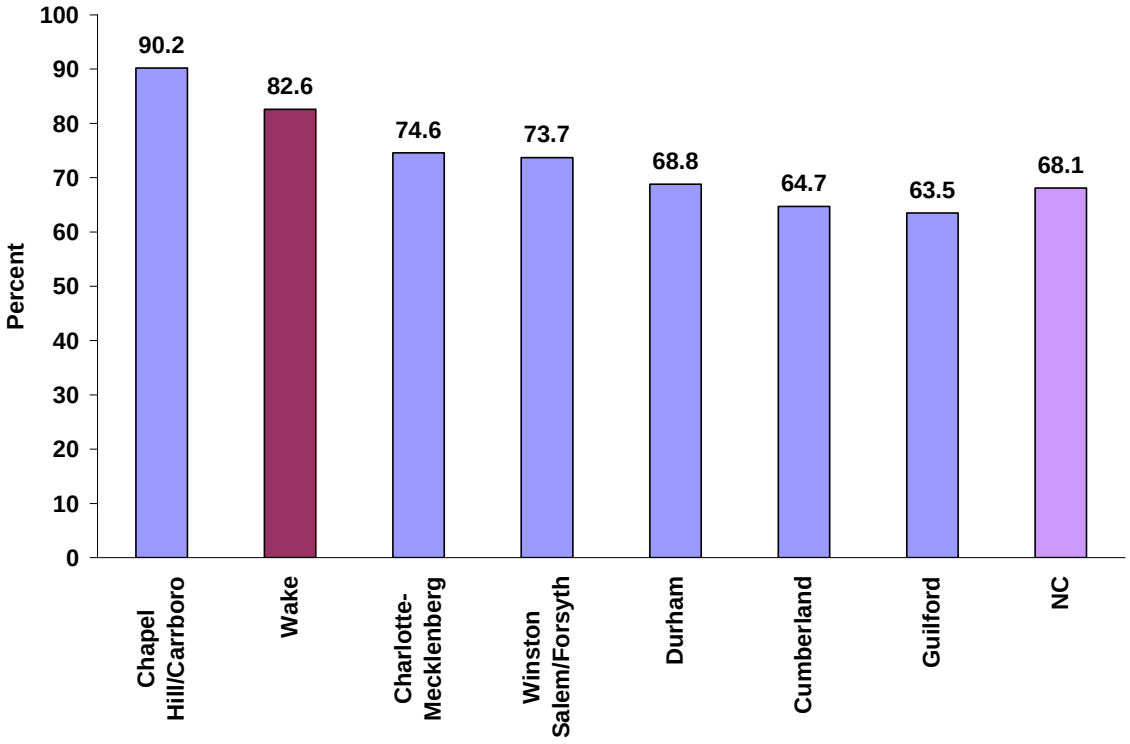
Definition of the Rate

This four-year cohort graduation rate for 2005-06 is basically defined as follows: The percentage of students entering the 9th grade *for the first time* during the 2002-03 school year who earned a diploma by or prior to the spring of 2006. There are a number of complex rules established by the state with respect to how and whether students are counted. Examples of those rules and exceptions include:

- Students who were repeating 9th grade in 2002-03 (i.e., were also 9th graders in 2001-02) are not included;
- Students who transfer into a school *after* 9th grade are included provided that they transfer in on grade level;
- Students who transfer from one NC public school to another are taken out of the sending school's calculations, and are added to the receiving school's calculations;
- Students who leave the school and their whereabouts cannot be tracked (e.g., students who move to another state or another country) are removed from the rate calculations; and
- Students who receive certificates of completion rather than an actual diploma (e.g., certain students with disabilities) are not counted as graduates.

Using this metric, the overall graduation rate for WCPSS in 2005-06 was 82.6 percent, meaning that just over four out of every five students who enrolled in 9th grade for the first time in the Fall of 2002 graduated four years later. Compared to other NC districts and the state as a whole, the WCPSS four-year graduation rate was high (Figure 40).

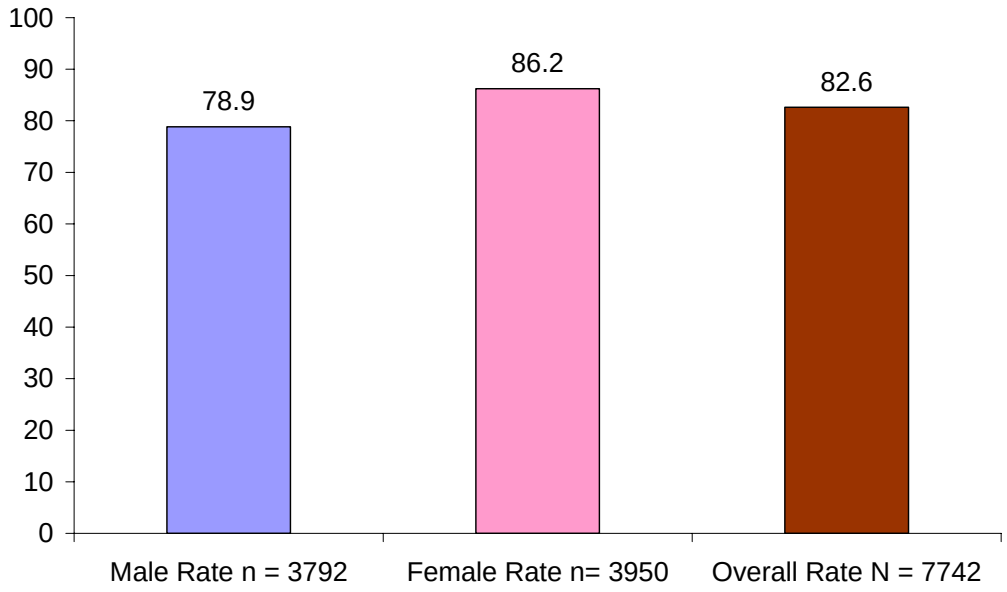
Figure 40
Four-year Graduation Rates for NC and Selected LEAs, 2005-06



Among various student subgroups, female students had a graduation rate just over 7 percentage points higher than male students (Figure 41). The four-year graduation rate varied considerably (from 58% to 92%) among ethnic subgroups, with White, Asian, and American Indian students showing rates at or near 90% (Figure 42).

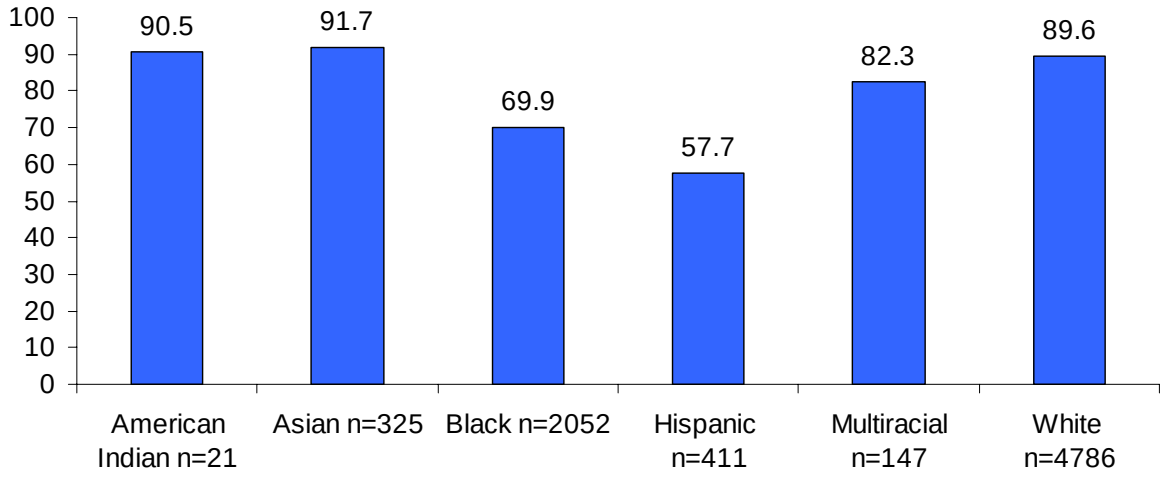
Students with disabilities (SWD), students eligible for free or reduced-price lunch (FRL), and students with limited English proficiency (LEP) also had graduation rates that were substantially below the systemwide average (Figure 43). In addition, students who fell into two or more of these categories showed even lower rates (Figure 44).

Figure 41
WCPSS Four-year Graduation Rates by Gender, 2005-06



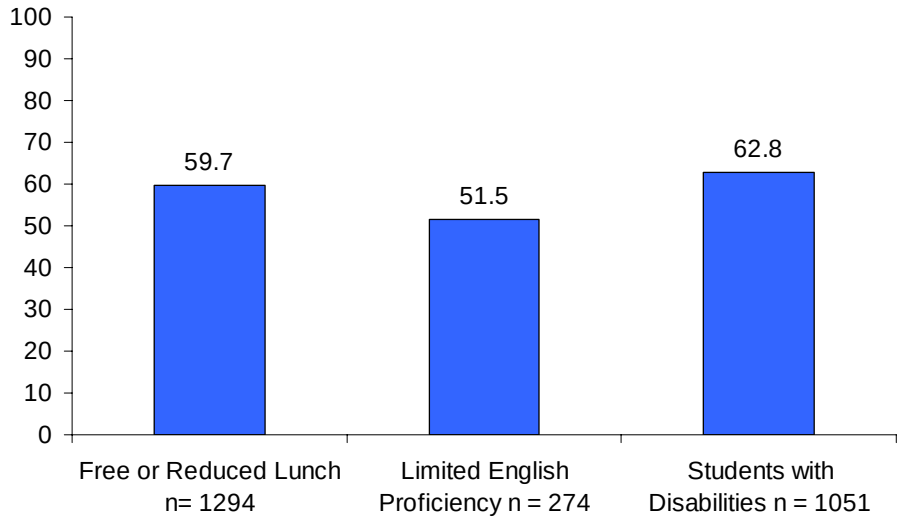
Source: Official NCDPI graduation cohort files, class of 2005-06.

Figure 42
WCPSS Four-year Graduation Rates by Ethnicity, 2005-06



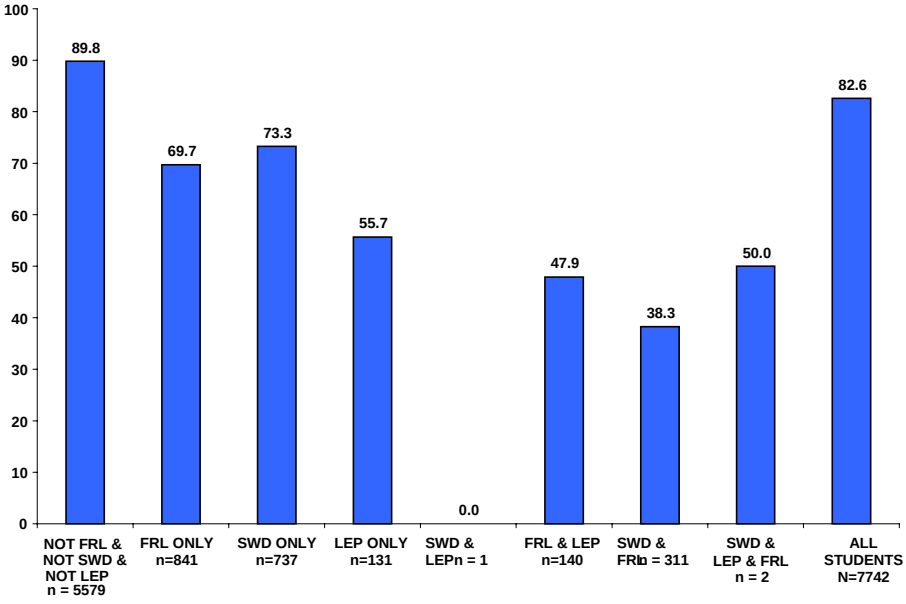
Source: Official NCDPI graduation cohort files, class of 2005-06.

Figure 43
WCPSS Four-year Graduation Rates by Academic Risk Group, 2005-06



Source: Official NCDPI graduation cohort files, class of 2005-06.

Figure 44
WCPSS Four-year Graduation Rates by Academic Risk Group Combinations, 2005-06



Source: Official NCDPI graduation cohort files, class of 2005-06.

While the overall graduation rate for WCPSS in 2005-06 was high compared to the state and other similar school districts, large discrepancies exist between various student subgroups. Black/African-American students, Hispanic/Latino students, and students from the three academic risk groups identified (SWD, FRL, and LEP) had graduation rates that were substantially below that of other students. In the future, it will be possible to monitor the

changes in these rates over time to see whether the likelihood of graduating from high school in four years increases overall, and for those student subgroups in particular. With the advent of new, more stringent graduation requirements for students entering high school in 2006 and beyond (see the End-of-Course Results section of this document for more information), the possible change in graduation rates due to those higher standards may appear beginning with the graduating class of 2010.

HIGH SCHOOL RETENTION RATE

Background

The WCPSS Board of Education's Promotion and Intervention policy, adopted in February 2000, requires students to demonstrate proficiency in grade-level competencies in English/language arts and mathematics to be promoted each year. Additionally, the State Board of Education (SBE) Student Accountability Standards policy requires students in grades 3, 5, and 8 to demonstrate grade-level proficiency on the state End-of-Grade (EOG) tests in reading and mathematics. WCPSS has extended this to all grades 3-8. Because multiple-choice tests are not used in grades K-2, student progress in grades K-2 is regularly assessed based on guidelines developed by WCPSS instructional services staff. Course grades are also used to assess grade-level competency in English/language arts and mathematics, with middle school students required to earn a passing course grade in English/language arts, mathematics, either social studies or science, and a minimum of 50% of remaining courses taken. The WCPSS policy recognizes the statutory authority of the principal to make all final promotion decisions. Additional details regarding the Promotion and Intervention policy can be found on the WCPSS Web site (http://www.wcpss.net/promotion-intervention) and in Board Policy 5530.

In 2005-06, due to a delay in the reporting of the math EOG scores based on the new test and curriculum, promotion retention decisions were not based on student performance on the math EOG.[1] The state allows districts to consider a test score within one standard error of measurement as proficient, but WCPSS has not done so to date. As has been mentioned, the new math standards are considerably more difficult. The number of students considered for retention, and ultimately retained, may rise at grades 3 through 8 due to the more rigorous standards.

At the high school level, promotion retention decisions are based on the credits students earned through successful completion of specific required courses (for example, the appropriate English credit is required for promotion to the next grade level. Additional information on the courses required for promotion can be found on the WCPSS web site (http://www.wcpss.net/curriculum-instruction/docs_downloads/planning-guides).

Overall Retention Rates

At the end of 2005-06 school year, students were identified by schools as promoted, graduated, or retained, and this information was submitted to the Department of Public Instruction. Graduates are considered promoted. (Any changes in status as of fall are not reflected in these data.) Based on this definition, 96% of WCPSS' students K-12 were promoted, in 2005-06, while 4% were retained (4,876 students) were retained. Thus, WCPSS students are promoted at a high rate, but differences exist in the percentage of students promoted by grade level, ethnicity, academic risk factors, and gender.

[1] Further information on the other key components of the WCPSS Promotion and Intervention Policy can be found in our report *Promotion/Retention of Students in Grades K-8 2000-01* (Report No. 02.08).

Grade Level

The following table displays the promotion and retention rates of WCPSS students by grade level. While all grade levels had high promotion rates, ranging from 85% to 99%, there were distinct differences among grade levels.

- The high school level had the highest retention rates. By grade, 9th-grade students had the highest rate of retention (15%), followed by grade 10 (8.9%) and grade 11 (5.3%).
- The elementary level had the next highest retention rate. Kindergarten and grade 1 had the highest rate of retention (4.8%) within the grade span.
- Middle school had the lowest retention rate, with just over one percent of students retained at each grade.

Table 12
Promotion Retention, 2005-06, Grades K-12
Grades K-12

Grade	Number Retained	Percent Retained	Number Promoted	Percent Promoted	Total
KI	513	4.8%	10,206	95.2%	10,719
1	495	4.8%	9,881	95.2%	10,376
2	278	2.8%	9,780	97.2%	10,058
3	134	1.4%	9,636	98.6%	9,770
4	80	0.9%	9,215	99.1%	9,295
5	49	0.5%	9,286	99.5%	9,335
6	125	1.3%	9,223	98.7%	9,348
7	127	1.4%	9,303	98.7%	9,430
8	135	1.5%	9,093	98.5%	9,228
9	1,489	15.0%	8,473	85.1%	9,962
10	756	8.9%	7,733	91.1%	8,489
11	402	5.3%	7,240	94.7%	7,642
12	293	4.1%	6,790	95.9%	7,083
Total	4,876	4.0%	115,859	96.0%	120,735

Frequency Missing = 2
Source: WCPSS Student Information Systems data file of K-12 students flagged as promoted, graduated, or retained as of the end of the 2005-06 school year.

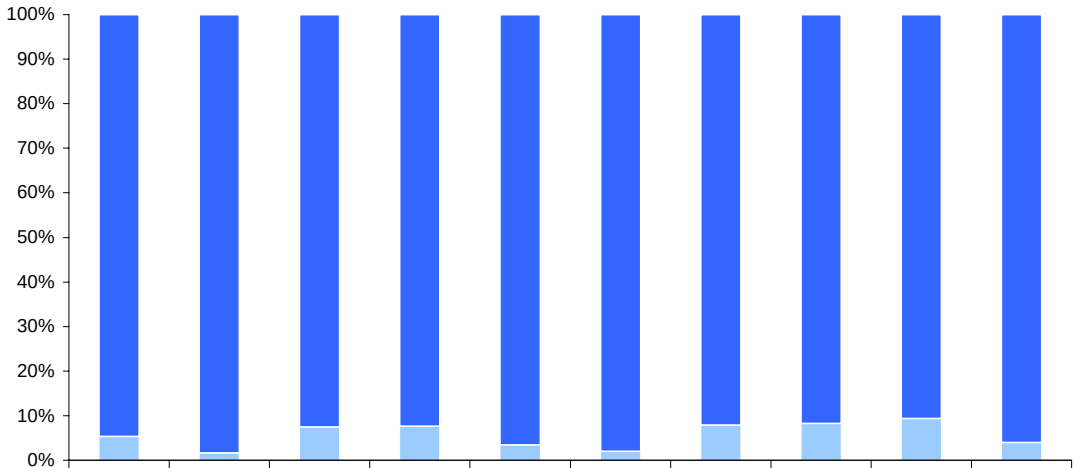
The higher rate of retention at the high school level probably reflects the different criteria used to determine promotion to the next grade. As noted earlier, high school promotion/retention decisions are made based on successful completion of specific required courses and not on the principal to make the final promotion decision, as is the case in the lower grade levels. At the elementary level, higher rates of retention at kindergarten and grade 1 may reflect the belief that retention is preferable in the early grade levels to ensure that students have mastered basic skills, the belief that there is less stigma attached to retention in the early grades, maturation considerations, or local standards for grade-level status.

Ethnicity and Academic Risk Factors

More than 90% of students in all NCLB subgroups (ethnicity, FRL, LEP, SWD) in WCPSS were promoted (see Figure 45). Remember that many students are represented in more than one subgroup and that the overall retention rate in WCPSS was 4%.

- LEP students had the highest rate of retention (9.3%), as compared to non-LEP students (3.7%).
- SWD and FRL students also had higher retention rates (about 8%) than other subgroups.
- Among racial groups, Black/African American and Hispanic/Latino students had the highest rate of retention (approximately 8%).

Figure 45
Promotion/Retention by NCLB Group, 2005-06, Grades K - 12

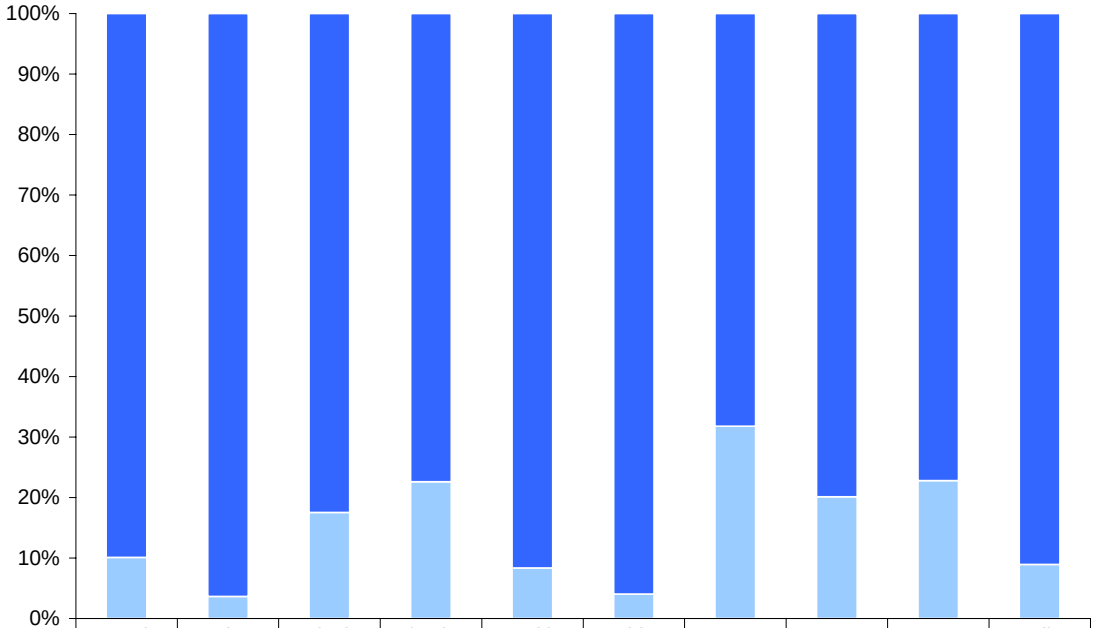


	American Indian n=317	Asian n=5,772	Black n=32,175	Hispanic/ Latino n=11,262	Multiracial n=4,275	White n=66,213	FRL n=34,645	SWD n=16,859	LEP n=7,858	All Students n=120,014
Promoted	94.6%	98.4%	92.5%	92.4%	96.6%	98.0%	92.1%	91.7%	90.7%	96.0%
Retained	5.4%	1.6%	7.5%	7.6%	3.4%	2.0%	7.9%	8.3%	9.3%	4.0%

Source: WCPSS Student Information Systems data file of K-12 students flagged as promoted, graduated, or retained as of the end of the 2005-06 school year.
Note: Ethnic group counts are unduplicated. FRL, SWD, and LEP counts are duplicated. Some students (n=721) not included due to missing demographic data.

The patterns of students retained by subgroup at the high school level were consistent with the overall (K-12) results. At the high school level, the percentage of students retained was higher for each subgroup and the total, due to higher retention rates.

Figure 46
Promotion/Retention by NCLB Group, 2005-06, Grades 9 - 12



	A.Ind. n=89	Asian n=1,479	Black n=8,846	H/Latino n=2,013	Multi. n=742	White n=19,529	LEP n=1,160	SWD n=4,354	FRL n=6,500	All n=32,698
Promoted	89.9%	96.3%	82.5%	77.4%	91.6%	96.0%	68.2%	79.9%	77.2%	91.1%
Retained	10.1%	3.7%	17.5%	22.6%	8.4%	4.0%	31.8%	20.1%	22.8%	8.9%

Source: WCPSS Student Information Systems data file of K-12 students flagged as promoted, graduated, or retained as of the end of the 2005-06 school year.
Note: Ethnic group counts are unduplicated. FRL, SWD, and LEP counts are duplicated. Some students (n=721) not included due to missing demographic data.

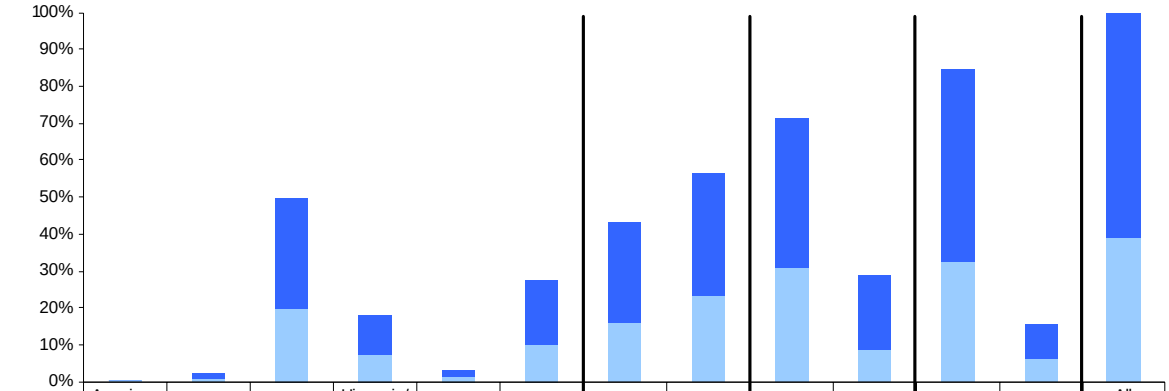
Characteristics of Retained Students

Subgroups and Gender

Another way to examine retention is the characteristics of those who are retained. The next figure displays the percentage of those retained at the end of 2005-06 by gender within subgroups. Each section of the graph totals the number of all students retained. Overall, a higher percentage of retained students were male (61%) than female (39%). This pattern is repeated across all NCLB groups with the exception of American Indian students. The proportion of retained students is not equally distributed across NCLB groups.

- By ethnicity, Black/African American students represent the highest percentage of retained students (at approximately 50%). White students represent the second highest percentage (27%). Black/African American students are over-represented and White students under-represented relative to the percentage of the population each represents (27% and 55%, respectively).
- LEP students represent about 15% of those retained, with SWD students representing 28%. This illustrates the importance of group size and perspective when examining retention. Because there are fewer WCPSS students who are categorized as LEP or SWD than other groups, they represent smaller percentages *relative to all those retained* while having a higher *rate* of retention within their student group.
- FRL students constitute a higher percentage of retained students (57%) than students who do not receive free or reduced-priced lunch (43%). FRL students are over-represented among retainees relative to the percentage of the population they represent (29%).

Figure 47
Students Retained at the End of 2005-06 by Gender and NCLB Group, Grades K-12



	American Indian n=17	Asian n=95	Black n=2,407	Hispanic/ Latino n=857	Multiracial n=146	White n=1,316	Not FRL n=2,093	FRL n=2,745	Not SWD n=3,446	SWD n=1,392	Not LEP n=4,104	LEP n=734	All Students n=4,838
Male	0.2%	1.1%	30.2%	10.6%	1.9%	17.2%	27.5%	33.5%	40.7%	20.4%	52.3%	8.8%	61.0%
Female	0.2%	0.9%	19.6%	7.1%	1.2%	10.0%	15.7%	23.2%	30.5%	8.4%	32.6%	6.4%	39.0%

Source: WCPSS Student Information Systems data file of K-12 students flagged as promoted, graduated, or retained as of the end of the 2005-06 school year.
Notes: Bold lines indicate student groups that total to 100%. Some (n=38) students are missing LEP and FRL status and are not included in this figure.

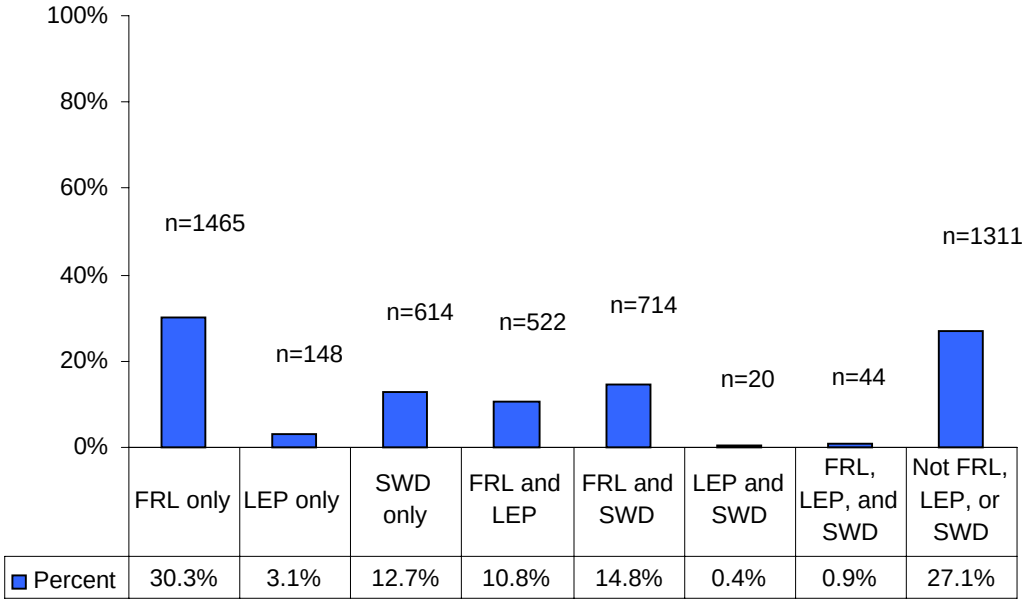
The pattern of retention rates remained the same among NCLB subgroups at the elementary, middle and high school levels. At the middle school level, the percentages of retained students who were Hispanic/Latino or LEP were lower than at the elementary and high school levels. Although in the overall middle school population there are fewer Hispanic/Latino and LEP students than at the elemenatary school level, these groups represent a higher percentage of the middle school population than at the high school level.

Academic Risk Factor Combinations

Figure 48 displays students retained at the end of 2005-06 for all possible combinations of FRL, SWD, and LEP students. Each student is represented in only one of the categories in the following figure.

- Across K-12, more than half of those retained were FRL. Close to 75% were FRL, SWD, or LEP. About one third (30%) were only FRL. Students who were FRL and SWD represented the most common combination of academic risk factors.
- 16% of those retained were LEP or SWD but not FRL.
- 27% of retained students did not fall into the FRL, SWD, or LEP academic risk categories.
- The patterns of students retained by subgroup at the elementary, middle, and high school levels were consistent with the overall K-12 results.
- At the high school level, FRL only represented slightly fewer students, 26% versus over 30% of elementary and middle school students.

Figure 48
Students Retained by Academic Risk Group Combinations, At the End of 2005-06, Grades K-12



n =4,838.
Source: WCPSS Student Information Systems data file of K-12 students flagged as promoted, graduated, or retained as of the end of the 2005-06 school year.

Note: 38 students are missing LEP and FRL status and are not included in this figure.

Summary

While WCPSS students were promoted at a high rate, the promotion rate was influenced by grade level, ethnicity, academic risk factors, and gender. Since specific courses are required for promotion at the high school level, this level had the highest rate of retention. Early elementary school (kindergarten and grade 1) had the next highest rates of retention, which may reflect the desire to ensure students have mastered basic skills and the belief that there is less stigma associated with retention in these early grades. The percentages of students retained within academic risk subgroups was approximately twice as high as WCPSS overall. Students with FRL, LEP, or SWD status as well as Black and Hispanic/Latino students were over-represented among retained students relative to their percentage of the population. Within all subgroups, with the exception of American Indian students, male students were retained at a higher rate than female students.

HIGH SCHOOL DROPOUT RATE

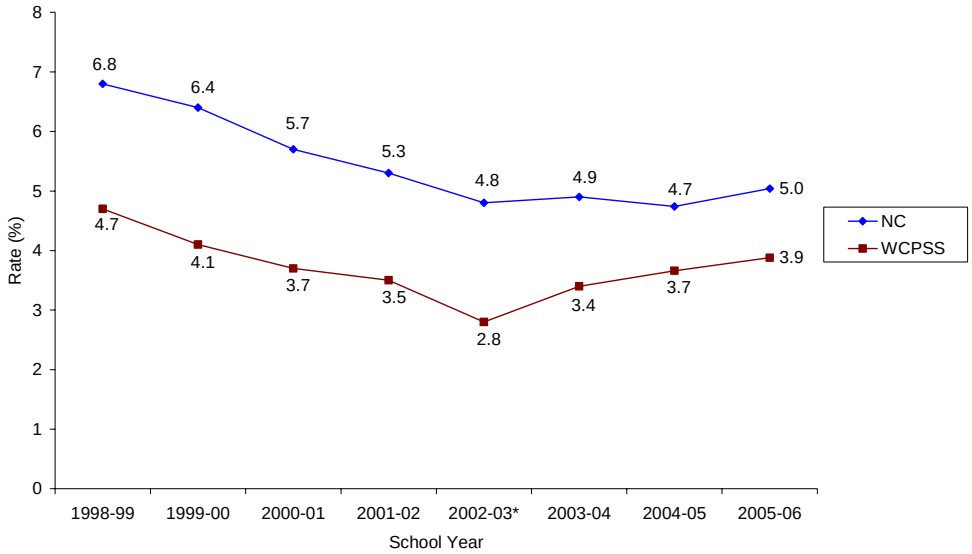
Each year WCPSS tabulates the number of dropout from the prior school year, and uses those numbers to calculate an "event dropout rate". The event dropout rate is "the number of students in a particular grade span dropping out in one year divided by a measure of the total students in that particular grade span" (North Carolina Department of Public Instruction (NCDPI, 2007). These rates are considered "duplicated", as a single individual may be counted as dropping out more than once if he or she drops out of school in multiple years. However, no student who drops out is counted more than once in any give year (NCDPI, 2007).

For the purposes of this report, dropouts are students who were enrolled at some time during the previous school year (e.g., 2005-06) but were not enrolled (and who did not meet reporting exclusions) on the twentieth day of the current school year (e.g., 2006-07). Reporting exclusions also include expelled students and students who transfer to a private school, home school, or a state-approved educational program. Further information on the rules and procedures for counting and reporting dropouts can be found at http://www.ncpublicschools.org/docs/schoolimprovement/effective/dropout/2006manual.pdf .

On January 31, 2007, the North Carolina Department of Public Instruction released their annual dropout report for the state covering the 2005-06 school year. The charts below show grades 9-12 dropout rate for WCPSS compared to previous years, compared to other large school districts in North Carolina, and compared to the state as a whole.

Over the past several years, the high school dropout rate in WCPSS has dropped from 4.7 percent to 3.9 percent (Figure 49). Each year since 1999, the WCPSS dropout rate has been below that of the state. Since 2002-03, however, the WCPSS dropout rate has actually been increasing.

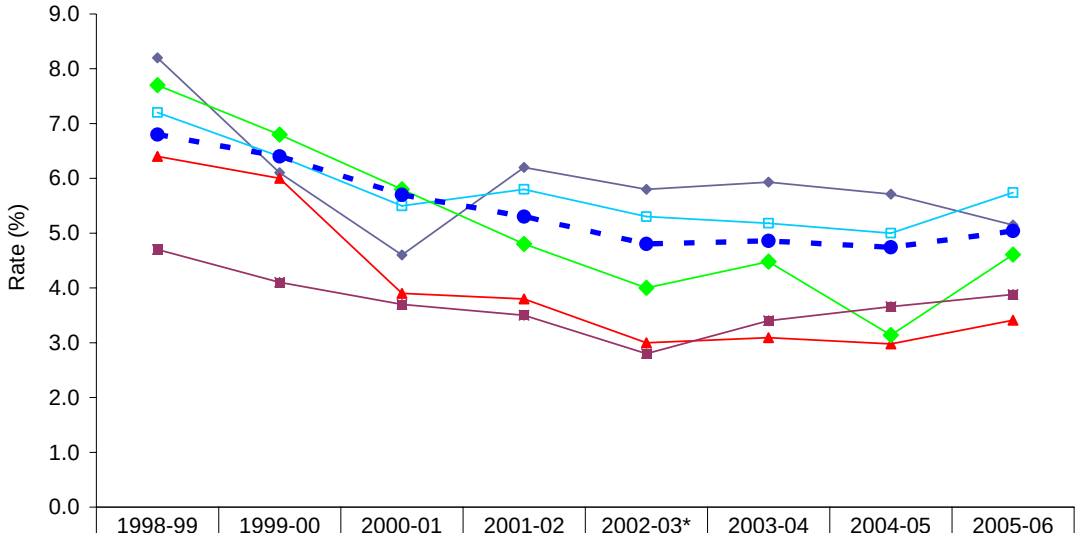
Figure 49
High School Dropout Rate, WCPSS and NC, 1999-2006



* - The dropout rate for WCPSS in 2002-03 that was reported by the state was slightly higher than 2.8, as the state was missing records for a small number of dropouts that year.

Compared to other large school districts in North Carolina, Durham, Forsyth, and Mecklenburg had higher dropout rates in 2005-06 than WCPSS, while Guilford had a lower rate (Figure 50). Of those districts, only WCPSS has had a rate below 5% in each of the past eight years.

Figure 50
High School Dropout Rates in Selected NC School Districts, 1999-2006

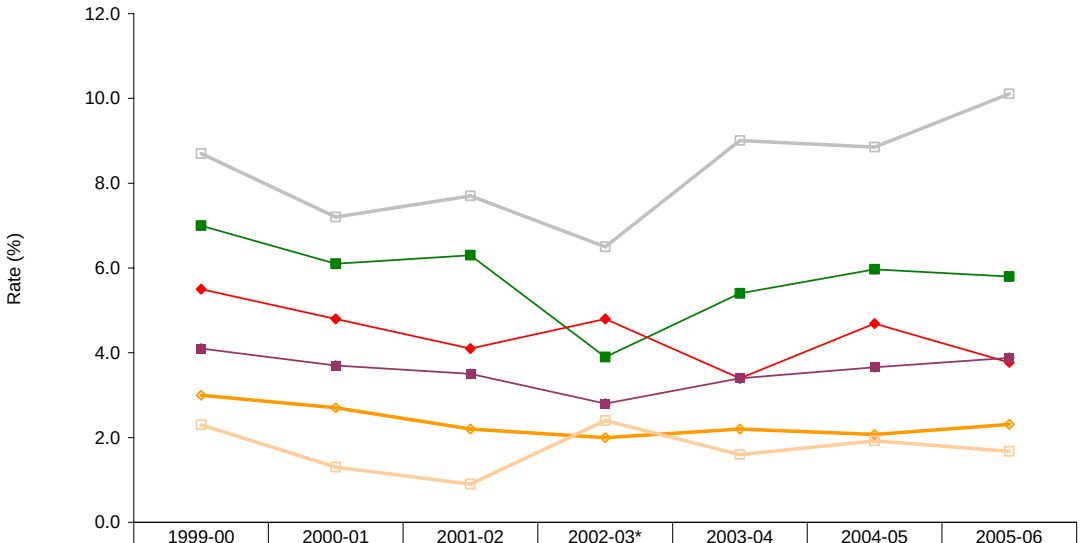


	1998-99	1999-00	2000-01	2001-02	2002-03*	2003-04	2004-05	2005-06
Durham	8.2	6.1	4.6	6.2	5.8	5.9	5.7	5.2
Forsyth	7.2	6.4	5.5	5.8	5.3	5.2	5.0	5.7
Guilford	6.4	6.0	3.9	3.8	3.0	3.1	3.0	3.4
Mecklenburg	7.7	6.8	5.8	4.8	4.0	4.5	3.1	4.6
Wake	4.7	4.1	3.7	3.5	2.8	3.4	3.7	3.9
NC	6.8	6.4	5.7	5.3	4.8	4.9	4.7	5.0

* - The dropout rate for WCPSS in 2002-03 that was reported by the state was slightly higher than 2.8, as the state was missing records for a small number of dropouts that year.

WCPSS dropout rates for African American, Asian, and Multiracial students dropped in 2005-06, while the rates for Hispanic/Latino and White students increased (Figure 51). Note that the Asian and Multi-racial student groups each have very few (i.e., fewer than 40) students; therefore, their rates may fluctuate more from year to year than rates for the other ethnic subgroups. No data are reported for Native American students due to very low numbers of dropouts in that group.

Figure 51
WCPSS High School Dropout Rates by Ethnicity, 2000-2006



	1999-00	2000-01	2001-02	2002-03*	2003-04	2004-05	2005-06
Hispanic/Latino	8.7	7.2	7.7	6.5	9.0	8.8	10.1
African American/Black	7.0	6.1	6.3	3.9	5.4	6.0	5.8
Multi-racial	5.5	4.8	4.1	4.8	3.4	4.7	3.8
White	3.0	2.7	2.2	2.0	2.2	2.1	2.3
Asian	2.3	1.3	0.9	2.4	1.6	1.9	1.7
Native American*							
WCPSS	4.1	3.7	3.5	2.8	3.4	3.7	3.9

Note: Rates for Native American students are not shown due to small cell sizes.

* - The dropout rate for WCPSS in 2002-03 that was reported by the state was slightly higher than 2.8, as the state was missing records for a small number of dropouts that year.

FRESHMAN SUCCESS MEASURES FROM THE UNIVERSITY OF NORTH CAROLINA SYSTEM

The University of North Carolina (UNC) General Administration compiles statistics on the performance of students during their early undergraduate years. These data include various indicators of success, pre-college preparation, and persistence in higher education.

By linking those measures back to the high schools from which their students graduated, school systems around the state can access information on how successful their graduates have been in the UNC system. Knowing how well WCPSS graduates perform in that system provides another indicator of how well prepared those graduates are for postsecondary education, particularly since the UNC system schools are the predominant destination for college-bound graduates from WCPSS.

As shown in Table 13, freshmen in the UNC system who graduated from a WCPSS high school posted higher grade point averages and were slated to return at a slightly higher rate than freshmen in general in 2004-05. In addition, Table 14 indicates that WCPSS graduates were slightly less likely to have to take remedial courses than the freshman population in general. Both of these sets of indicators imply that WCPSS graduates who entered the UNC system in 2004-05 were more prepared to be successful and to persist than their peers in general.

Table 13
Freshman GPA and Intent to Return, UNC Freshman Class of 2004-05

	WCPSS Grads	All UNC System Freshmen
GPA =>3.0 after 1 year	50.8%	40.3%
Percentage who are returning in 2005-06 for a second year	86.3%	81.6%

Source: http://www.northcarolina.edu/content.php/assessment/reports/student_info/far.htm.

Table 14
Remediation Rates, UNC Freshman Class of 2004-05

	WCPSS Grads	All UNC System Freshmen
Taking remedial English	1.8%	2.8%
Taking remedial math	10.1%	12.5%
Taking 1 or more remedial courses total	4.3%	6.9%

Source: http://www.northcarolina.edu/content.php/assessment/reports/student_info/far.htm.

Additional analyses from the UNC General Administration follow students even further into their postsecondary careers. After two years in the UNC system, the gap between WCPSS graduates and their peers shown in Table 15 becomes somewhat larger. Table 16 shows that persistence rates, grade point averages, and credit accumulation are all higher among WCPSS graduates after two years than for the UNC student population in general.

Table 15
Intent to Return, Grade Point Average, and Credit Accumulation After Two years, UNC Freshman Class of 2003-04

	WCPSS Grads	All Freshmen
Returning for a third year	78.7%	72.2%
Returning for a third year w/ GPA =>2.0	74.5%	66.7%
Returning for a third year w/ GPA =>2.0 *and* 60 or more credits	39.0%	30.3%

Source: http://www.northcarolina.edu/content.php/assessment/reports/student_info/far.htm .

The UNC General Administration also follows students throughout their college careers to measure graduation and persistence rates at the five year mark. Table 16 demonstrates that WCPSS graduates were both more likely to graduate and more likely to persist after five years than their peers who entered the UNC system in 2000-01.

Table 16
Five-year Graduation and Persistence Rates, UNC Freshman Class of 2000-01

	WCPSS Grads	All Freshmen
Percent graduated within 5 years	62.6%	55.7%
Percent persisting after 5 years	71.2%	65.5%

Note: "Percent persisting" includes both graduates and those students still enrolled.
Source: http://www.northcarolina.edu/content.php/assessment/reports/student_info/far.htm .

Taken together, the indicators reported by the UNC General Administration imply that WCPSS graduates are somewhat better prepared for academic success at the postsecondary level than are other students in general. This finding is particularly salient given the relatively large numbers of WCPSS graduates who enter that system each year.

ACCOUNTABILITY OUTCOMES

ABCs RESULTS

The ABCs of Accountability Model for high schools was first implemented in the 1996-97 school year, and has changed in a variety of ways over time. The model contains both a growth and a proficiency component. The most recent revision of the growth portion of the model occurred in 2005-06. The basic assumption of the new ABCs growth component is that a student should be expected to do at least as well on various End-of-Course (EOC) tests as s/he has done on prior End-of-Grade (EOG) and EOC tests compared to all other students who took the test in the standard-setting year. The standard-setting year is typically the first year that a test becomes operational and students receive scores for the tests.

For high schools, an average growth score is computed, combining the average of the academic change of the current year EOC tests for each student, the change in percent of students who met the competency requirement from 8^{th} grade to 10^{th} grade, the change in number of students receiving a diploma for college, technical college, or university prep and the change in number of dropouts. The average growth across all of these indicators has to be greater or equal to 0, for the high school to meet the Expected Growth Standard. In order to meet the High Growth Standard, the school must first meet Expected Growth, and then at least 60% of the students in the high school have to meet their individual growth targets on their EOC tests.

The second component of the ABCs Accountability Model for high schools is the performance component. In order to be designated with one of the labels the state confers upon schools, a high school must both make at least the Expected Growth Standard and have a certain percentage of their test scores fall into the Level III or Level IV range. Table 17 below provides the definitions for each of the recognition categories the state applies to schools under this accountability program.

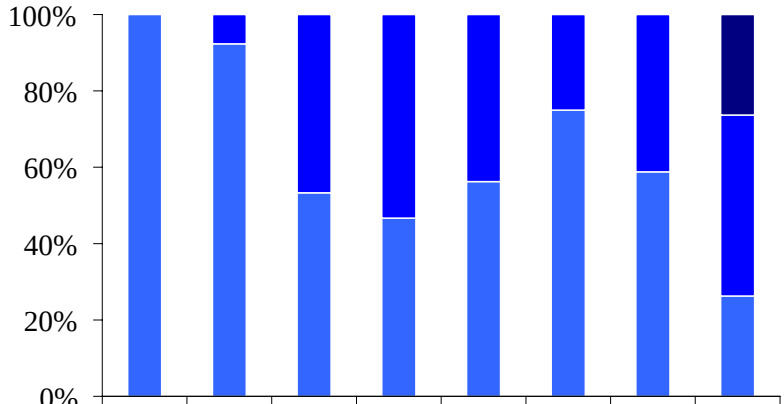
Table 17
Definition of ABCs Awards and Recognition Categories, 2005-06

Schools Making High Growth attained their high growth standard. Certified staff members each receive up to $1,500 and teacher assistants up to $500.
Schools Making Expected Growth attained their expected growth standard (but not their high growth standard). Certified staff members each receive up to $750 and teacher assistants up to $375.
Honor Schools of Excellence are schools that made at least expected growth, had at least 90% of their students' scores at or above Achievement Level III, and made Adequate Yearly Progress (see the AYP section of this document for further details).
Schools of Excellence are schools that made at least expected growth and had at least 90% of their students' scores at or above Achievement Level III but did not make AYP (see the AYP section of this document for further details).
Schools of Distinction are schools that made at least expected growth and had 80-89 percent of their students' scores at or above Achievement Level III.
Schools of Progress are schools that made at least expected growth and had 60-79% of their students' scores at or above Achievement Level III.
Schools Receiving No Recognition did not make their expected growth standards but have at least 60% of their students' scores at or above Achievement Level III.
Priority Schools are schools that have less than 60% of their students' scores at or above Achievement Level III, irrespective of making their expected growth standards, and are not Low-Performing Schools.
Low-Performing Schools are those that failed to meet their expected growth standards and have less than 50% of their students' scores at or above Achievement Level III.

Note: Adapted from http://www.ncpublicschools.org/docs/accountability/reporting/abc/2005-06/execsumm.html.

Eight WCPSS high schools met their Expected Growth Standard and 5 their High Growth Standard in WCPSS in 2006, for a total of 71%. That is a decrease from previous years, where 100% of high schools in WCPSS met expected or high growth. This decline is due in large part to the new growth model calculations implemented in 2005-06 which provide a more difficult standard for schools to reach. Figure 52 shows the number and percentage of WCPSS high schools meeting the state's growth standards since 1998-99. Compared to the state as a whole, WCPSS high schools were more likely in 2005-06 to make Expected Growth (71% vs. 59%) and high growth (26% vs. 18%).

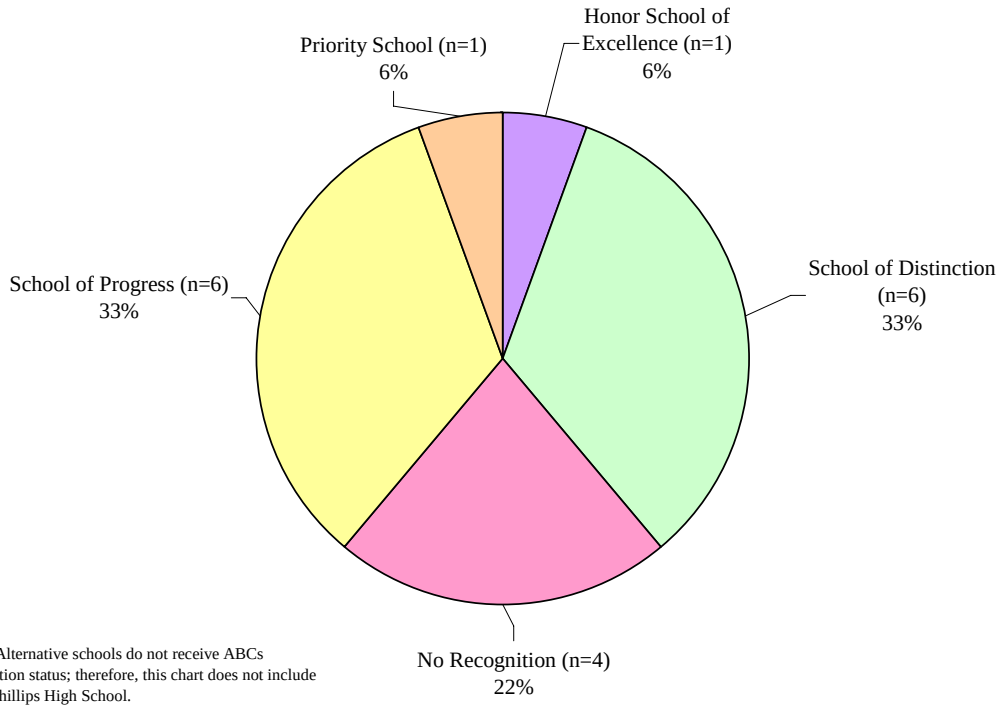
Figure 52
WCPSS High School Performance Under the ABCs Growth Model, 1999-2006



	1999	2000	2001	2002	2003	2004	2005	2006
School Not Meeting Expected Growth	0	0	0	0	0	0	0	5
Schools Achieving Expected Growth	0	1	7	8	7	4	7	9
School Achieving High Growth	13	12	8	7	9	12	10	5

Only one high school in WCPSS received the School of Excellence designation in 2005-06 – Green Hope High School. Additionally, since Green Hope High also met the Adequate Yearly Progress standards under No Child Left Behind (see the AYP section of this report for further information), they received the additional title of "Honor" School of Excellence. Six WCPSS high schools received the designation of School of Distinction in 2005-06. Figure 53 shows the distribution of all WCPSS high schools across the various ABCs categories for 2005-06.

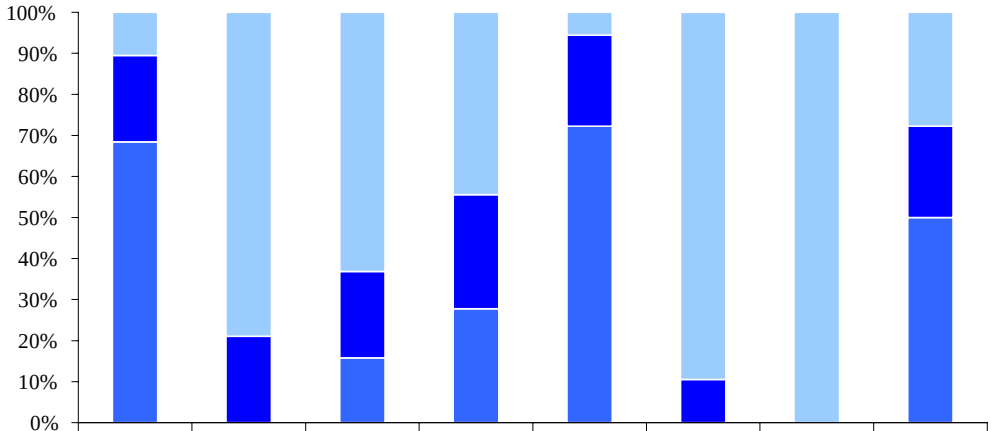
Figure 53
Distribution of WCPSS High Schools Across ABCs Award and Recognition Categories, 2005-06



Note: Alternative schools do not receive ABCs recognition status; therefore, this chart does not include Mary Phillips High School.

The calculations underlying the growth component of the ABCs Accountability model also permit the analysis of growth by EOC test. Figure 54 shows the percentage of WCPSS high schools that met the state's Expected Growth Standard on each of the 8 EOC tests that are included in the growth component of the model. In 2005-06, schools were most likely to meet their growth expectations in Algebra I and English I. Ninety-four percent of schools in WCPSS met at least expected growth in English 1, 89% in Algebra 1, 72 % in Physical Sciences, 56% in Chemistry, 37 % in Biology, 21 % in Algebra 2 and 11 % in Geometry. No school met their expected growth standard in Physics.

Figure 54
WCPSS High School Growth Results by Subject, 2005-06



	Algebra 1	Algebra 2	Biology	Chemistry	English 1	Geometry	Physics	Physical Science
Not Meeting Expected Growth	2	15	12	8	1	17	15	5
Achieving Expected Growth	4	4	4	5	4	2	0	4
Achieving High Growth	13	0	3	5	13	0	0	9

Note: Number of schools does not add up to 19 for all subjects because not all schools gave all tests.

ABCs Results for Subgroups

In addition to allowing for the calculation of growth by EOC test, the state's new growth model also allows for the calculation of a growth determination for each individual student who takes an EOC test. Among various student subgroups, growth in 2005-06 was uneven across the three tests that are most commonly taken by WCPSS students (Figures 55 through 57). In Algebra I, more than 60 percent of students across all subgroups met their individual growth targets. This 60% threshold corresponds to the state's definition of "High Growth" for a school. Growth results were highest among Asian students, White students, Multiracial students, and female students (Figure 55). Growth results by subgroup were more uneven in English I, with only female, Asian, White and Multiracial students achieving their growth targets at rates above 60%. Growth results in Biology were even lower and more uneven, with several groups achieving growth targets at below 40%. Interestingly, male students significantly outperformed female students in terms of growth in Biology, while the opposite was true in Algebra I and English I.

Figure 55
Percent of Students Achieving Their ABCs Growth Targets, Algebra I, 2005-06

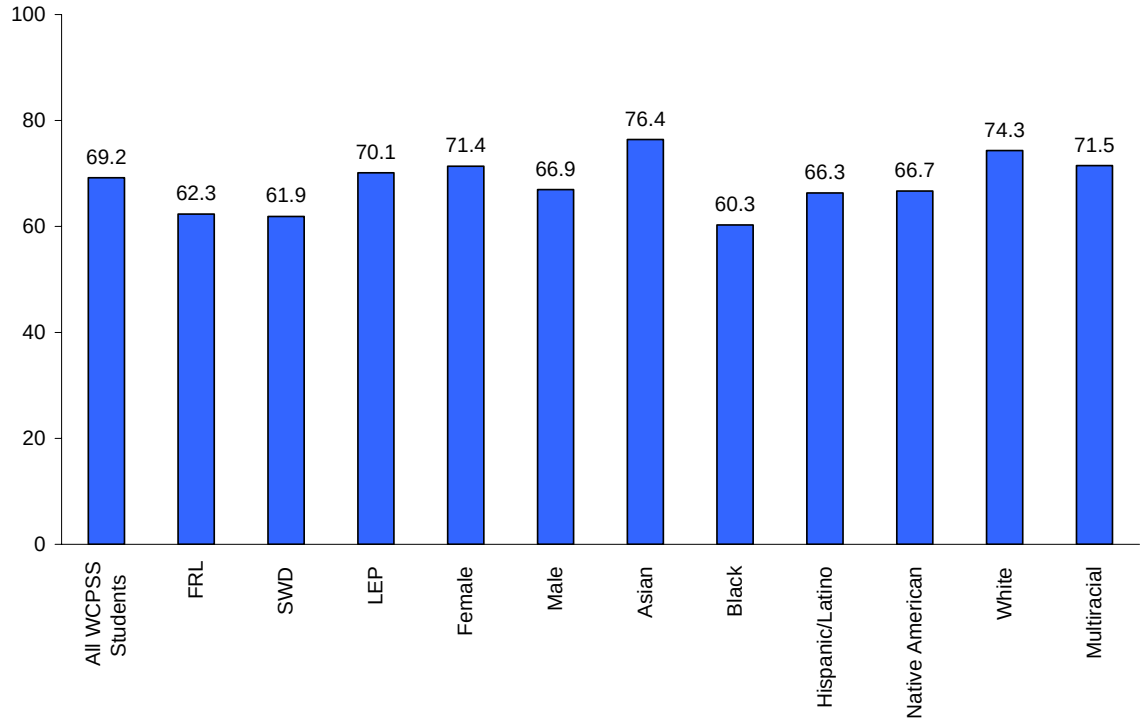


Figure 56
Percent of Students Achieving Their ABCs Growth Targets, English I, 2005-06

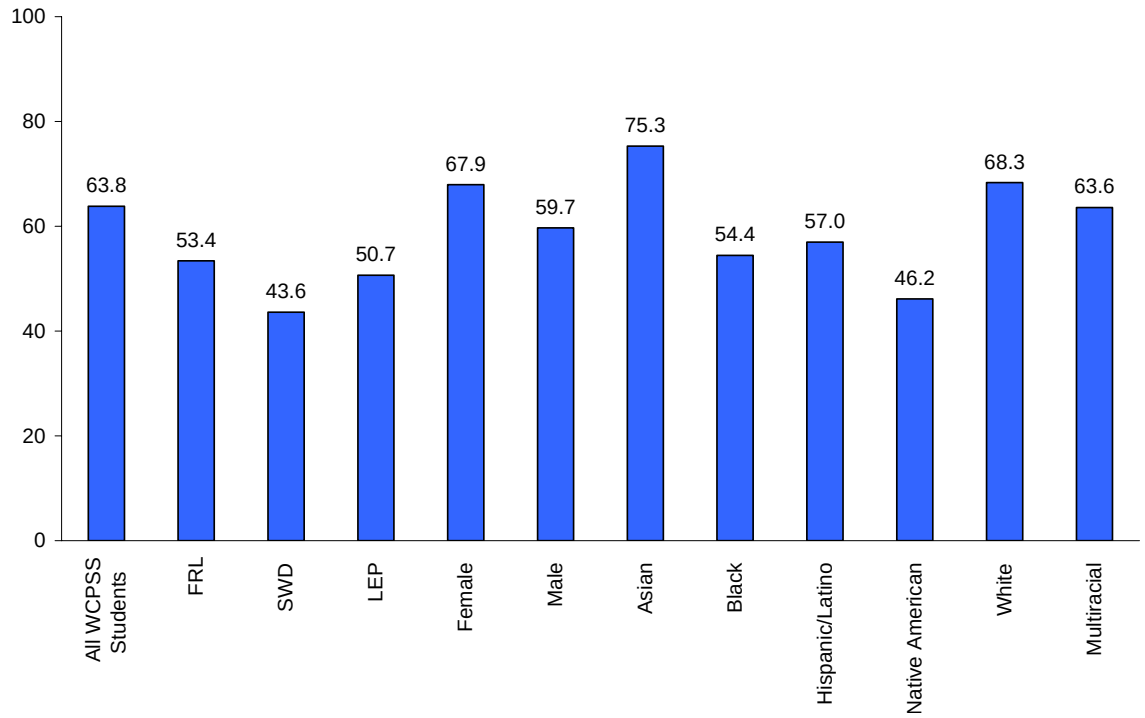
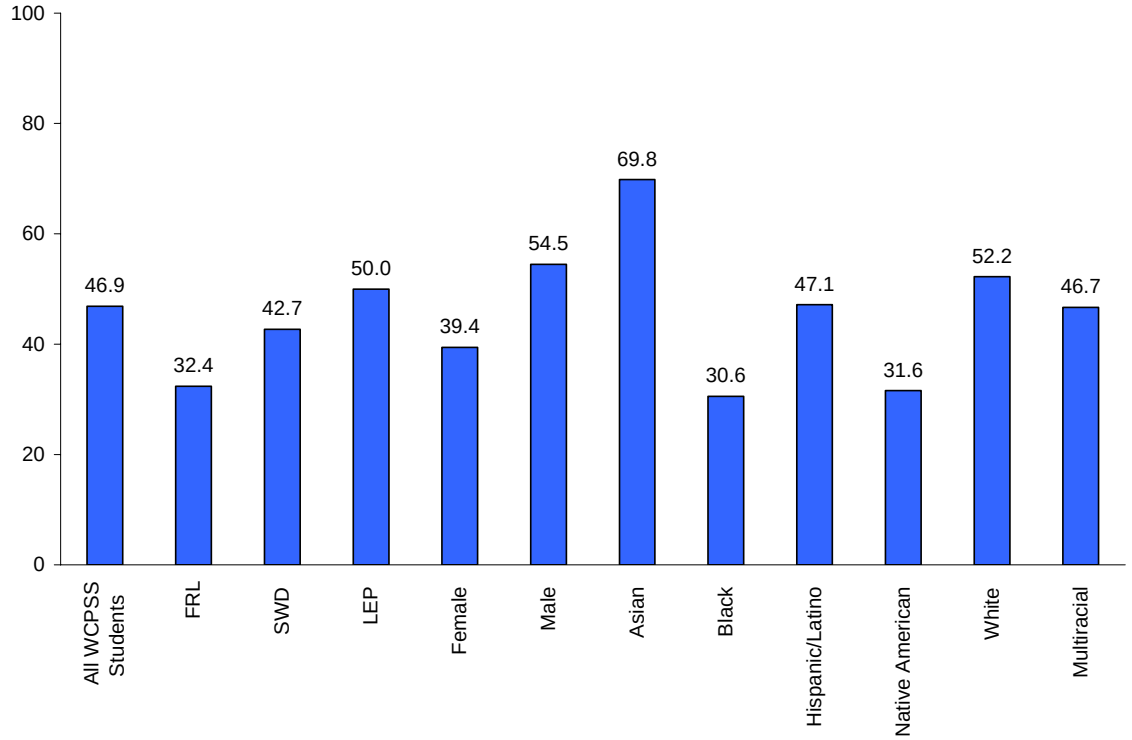


Figure 57
Percent of Students Achieving Their ABCs Growth Targets, Biology, 2005-06



Due to the significant changes in the state's growth model in 2005-06, it is not possible to draw accurate comparisons between the ABCs status results for high schools in 2005-06 compared to previous years. However, these indicators will be monitored in the coming years to develop trend information that will track how much improvement high schools are making in this new model. Compared to the state as a whole, however, WCPSS high schools fared better than high schools statewide with respect to meeting these new growth standards.

Discrepancies in the numbers of schools meeting growth expectations in each subject area in the first year of this new growth model were large. Although the state has not released similar figures for high schools statewide, anecdotal evidence suggests (as do the state's simulation studies that were conducted prior to the implementation of this new model) that it is much easier to meet growth expectations in the lower-level EOC areas (Algebra I, English I, etc.) than for the higher-level courses that are taken by a more select group of students. Trends in these areas will also be examined in future years to see whether those findings hold as well.

The changes to the state's growth model also now allow for the calculation of growth for various subgroups of students, which was not possible prior to 2005-06. Initial results in three selected subject areas suggest that the same achievement gaps that are evident in terms of overall performance (see the End-of-Course Results section of this document for further details) are also evident in terms of growth. In other words, many of the student subgroups which are least likely to score proficient on End-of-Course tests are also less likely meet their individual growth expectations on those tests when taking into consideration their past performance on other tests.

AYP RESULTS

Adequate Yearly Progress (AYP) is defined as a series of targets that schools, school districts, and states must meet each year to fulfill the requirements of The Elementary and Secondary Education Act (also referred to as the No Child Left Behind Act of 2001). It is primarily based on selected End-of-Grade (EOG) and End-of-Course (EOC). In each public school, there may be up to ten student subgroups that must meet the prescribed targets in both reading and math: the school as a whole (all students) plus students who are American Indian, Asian, Black, Hispanic/Latino, Multiracial, White, economically disadvantaged (defined students eligible for free or reduced-price lunch), students with limited English proficiency, and students with disabilities.

The achievement of these targets is measured by the percentage of students who take certain tests as well as the percentage of students who pass those tests. First, each school must test at least 95% of their students in each of the aforementioned subgroups. Then, the students in those subgroups must pass the appropriate reading and math tests at a certain rate.

In grades 3-8, the AYP proficiency targets set by the state for 2005-06 were: 76.7% proficiency in reading and 65.8% in math. In 10th grade, the proficiency targets were 35.4% in reading and 70.8% in math (i.e., Algebra I). These targets are set to increase incrementally every three years until they all become 100% in 2013-14.

In order for a school to be designated as achieving AYP, each of the ten subgroups of students must have met the following targets:
- 95% participation rate in the school's appropriate reading assessment
- 95% participation rate in the school's appropriate math assessment
- proficiency target in reading (76.7% in grades 3-8; 35.4% in grade 10)
- proficiency target in math (65.8% in grades 3-8; 70.8% in grade 10)

The targets are identical for all subgroups and for all schools across the state each year.

In addition to the four participation and performance targets for each subgroup, the school as a whole must also show progress on another "academic indicator": graduation rate for schools that graduate seniors, and attendance rate for schools without a 12th grade. Thus, a school could potentially have as many as 41 targets, including participation targets, proficiency targets, and the school-wide academic indicator.

All targets must be met for a school to meet AYP. If a school misses even one of those targets, the school fails to make AYP. Whether a school makes AYP each year is tied into the performance categories into which the state classifies schools each year (see the ABCs section of this report for further details). Also, for schools that receive certain federal funding under Title I of the Elementary and Secondary Education Act, failing to make AYP for multiple consecutive years can result in mandatory interventions such as supplementary tutoring, offering students the option to transfer to other schools, or even reconstituting the school with a new staff in more extreme cases. See http://www.ncpublicschools.org/nclb/ for more information on NCLB and AYP in North Carolina public schools.

For AYP proficiency (i.e., passing rate) calculations at the school level, schools are responsible for the performance of any subgroup for which there are at least 40 students in grades 3-8 or grade 10 who have been in membership for a full academic year. (A full academic year is defined by the state as 140 days in membership during the school year). AYP subgroups with a minimum of 40 students enrolled on the first day of testing (regardless of how many of those students meet the aforementioned membership requirement) must also meet the "95% tested" requirement for both reading and math assessments.

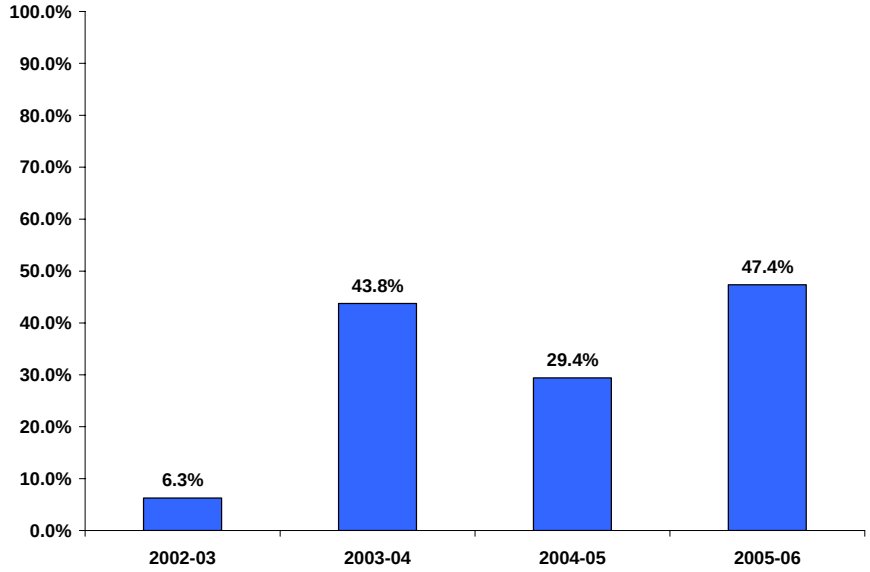
North Carolina uses EOG tests as the source of AYP measurements for students in grades 3-8. In 2005-06, high school measurements were based on Algebra I (for math) and a combination of English I EOC tests and the 10th-grade Writing Test (for reading). In order to meet the reading target, each 10^{th} grader must score proficient on both the English I EOC *and* the 10^{th} grade writing test. The 10th-grade High School Comprehensive Test was also used for a small number of students who had not taken an Algebra I and/or an English I course.

If a particular subgroup meets the 95% participation rate but does not meet the percent proficiency for a subject area, the subgroup can still meet AYP through what is referred to in the law as the "Safe Harbor" provision. The Safe Harbor provision is invoked if the subgroup has reduced the percentage of students not proficient by 10% from the previous year for that subject area *and* if the subgroup shows progress on the other academic indicator (attendance or graduation rate). However, Safe Harbor is not available if the subgroup did not have 40 students in both the current and the previous year.

AYP High School Results

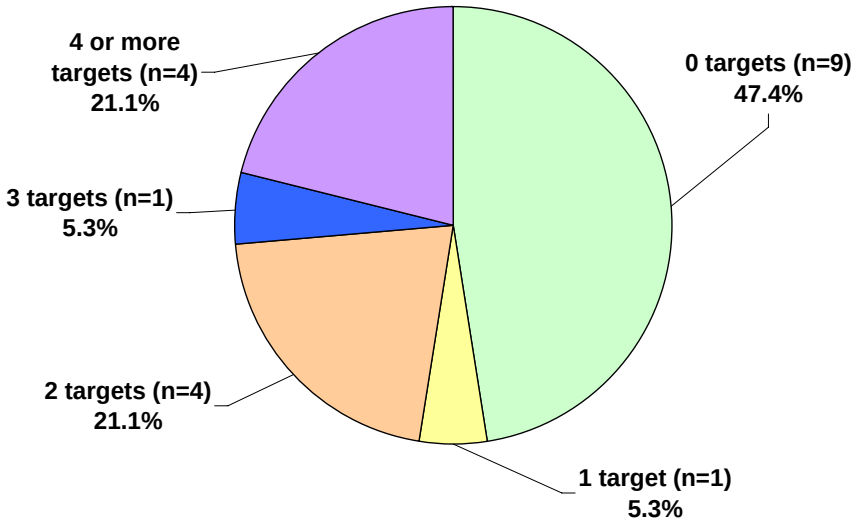
In 2005-06, nine out of 19 WCPSS high schools (47%) made AYP (Figure 58), the highest percentage in WCPSS since the inception of NCLB. The dip in the number of high schools making AYP in 2004-05 was in part due to the change in the targets that year, when the reading and math proficiency targets changed (e.g., the math target increased from 54.9% to 70.8%). Statewide in 2005-06, 49% of schools serving grades 9-12 made AYP.

Figure 58
WCPSS High Schools Making Adequate Yearly Progress, 2003-2006



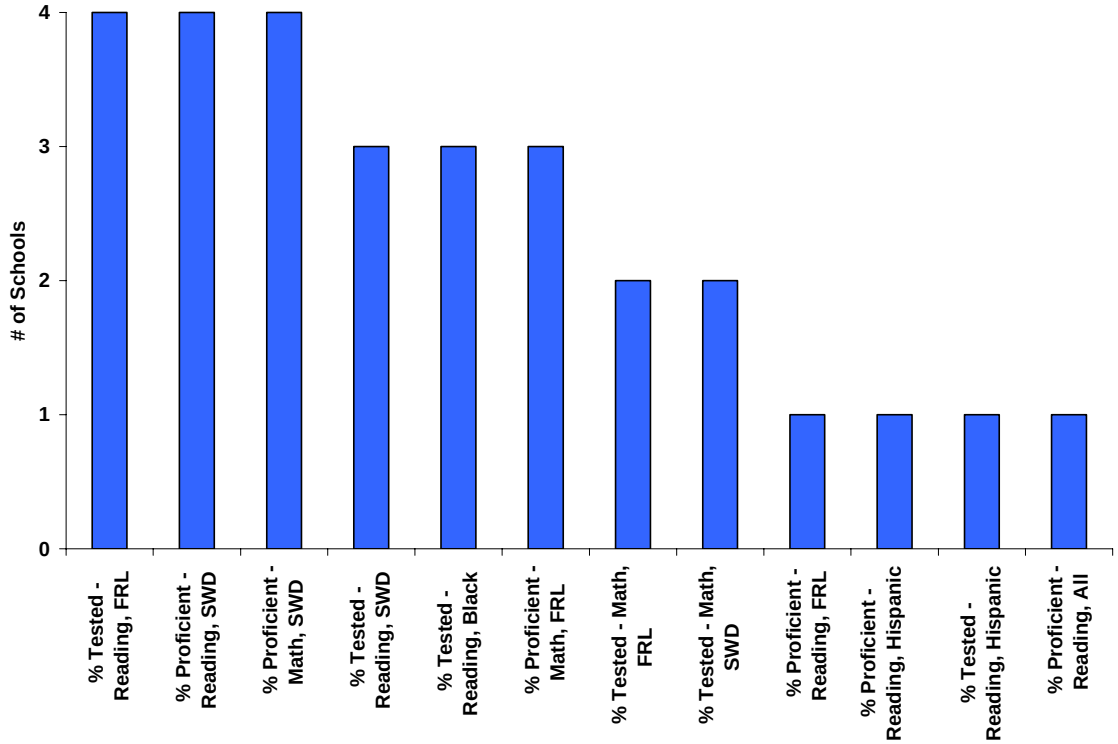
In addition, five other high schools missed only one or two targets (Figure 59). The total number of targets across all WCPSS high schools was 375 (an average of almost 20 targets per school). The total number of targets per high school ranged from 2 (an alternative school) to a high of 28, with ten high schools having 21 targets. Overall, WCPSS high schools in 2005-06 made 344 (92%) of the possible 375 targets.

Figure 59
Number of AYP Targets Missed for WCPSS High Schools, 2005-06



Of the 31 AYP targets that were missed, 13 (42%) were targets for the students with disabilities subgroup, and ten (32%) were targets for economically disadvantaged students (Figure 60). These two subgroups have historically been the subgroups for which schools are most likely to miss targets (Wake County Public Schools, 2005). In addition, 15 of the 31 targets missed by WCPSS high schools in 2005-06 were participation targets (i.e., failing to test 95% of the students in a particular subgroup), not proficiency targets. Participation targets are much more difficult for high schools to achieve (compared to elementary or middle schools) due to higher absenteeism as well as the fact that the 10th grade Writing Test in 2005-06 was only offered on two specific days in March 2006. Tenth-grade students who were absent for whatever reason on those days (excused or unexcused) could not be tested, according to state guidelines.

Figure 60
Number of AYP Targets Missed by Subgroup and Type, 2005-06



The number and percentage of WCPSS high schools making AYP rose slightly in 2005-06 after a small drop in 2004-05. Compared to high schools statewide, the number and percentage of WCPSS high schools making AYP was similar (49% vs. 47%, respectively). As in past years, the targets high schools were most likely to miss involved students with disabilities (SWD), students eligible for free or reduced-price lunch (FRL), Black/African-American students, and Hispanic/Latino students. Reading targets were also more difficult for high schools to meet than math targets in 2005-06, in part due to the effect of absenteeism on the participation rate for the 10th grade Writing Test.

As the state implements new and tougher standards for the Algebra I and English I tests in 2006-07, high school AYP results may be negatively affected. In addition, the growth in the number of students with limited English proficiency (LEP) in WCPSS high schools (see the Demographic Trends section of this report for more information) will, over time, cause more high schools to "acquire" new AYP targets for LEP students that they did not have before. At the elementary and middle school levels, AYP targets for LEP students are among the most difficult for schools to hit. Therefore, this may be another challenge facing high schools in the future in terms of their ability to make AYP.

EFFECTIVE PRACTICES

This section of the document details specific studies and initiatives that have taken place recently which address issues related to student achievement at the high school level. Brief summaries of each of the studies and initiatives are presented, along with internet sites where more comprehensive information can be accessed.

HIGH SCHOOL BIOLOGY STUDY 2001-2005

(for full report: http://www.wcpss.net/evaluation-research/reports/2006/0528biology.pdf)

Purpose of the Study

Of the five core EOC courses, Biology had the 2nd largest enrollment in 2004-05. In 2004-05, WCPSS made expected growth in Biology but not high growth. Biology also has the largest White-Black achievement gap among all EOC tests (see the EOC Results section of this report). One of the primary goals of the study was to identify the most successful WCPSS Biology teachers, based on EOC results over time.

Methods & Analysis

Forty-three teachers who had taught Biology for 4 consecutive years from 2001-02 to 2004-05 were chosen for the study. After analysis, the 10 most effective and 10 least effective teachers were identified, based on average student residuals. Comparisons of surveys, observations, student scores, and interview results of the top and bottom teachers were made.

Results

Comparisons between top teachers and bottom teachers were not easy. There was variance between teachers and exceptions to every generalization made. In general, however, the top Biology teachers:

- Were clustered in 7 schools, bottom teachers were in 7 schools, and 2 schools had both top and bottom teachers;
- averaged 83.4% of their assigned instructional time teaching Biology while bottom teachers averaged 64.7%;
- Focused class time in lecture and lab, while most bottom teachers used little lecture, more projects, and partner activities;
- Planned their own lessons, (did not use provided activities in pacing guides) collaborated with other teachers, and used data frequently; and
- Were not necessarily teaching the highest-achieving students in terms of performance levels.

Survey results indicated that the top effective teachers:

- Focused on Biology (e.g., often did not teach other subjects),
- Used data,
- Studied/planned with each other,
- Focused students' time on Standard Course of Study goals, and
- Maximized student time and resisted other school duties.

Observations of successful Biology teachers showed:

- They planned together as a group,
- They had students review selected EOC content,
- They made data-driven decisions,
- They conducted frequent assessments,
- They made students aware of their progress,
- They had "year at a glance" documents,
- They were well dressed, and
- They were in a school with strong departmental leadership.

Conclusions

It is possible to identify teachers who consistently help students achieve high growth. Results of analysis of Biology data for the year after the study was completed (2005-06) demonstrated that the top teachers and bottom teachers from the previous four years pertaining to the original study were still largely the same. System-level recommendations include organizing system/school-wide mandatory EOC support groups and provide structure for meetings, disaggregating average residuals, and studying top performing teachers further. School-level recommendations include focusing EOC teacher time on instruction in that EOC subject, use of common planning time for EOC teachers, and more sharing of effective practices across schools.

HIGH SCHOOL ALGEBRA I STUDY 2002-2006

(study summary available at http://www.wcpss.net/evaluation-research/reports/2006/0610algebra_study02_06.pdf)

Purpose of the Study

Algebra 1 is a high school graduation course requirement for most students, and the entering high school class of 2006-07 must pass the corresponding state EOC test in order to earn a diploma. In 2005-06, 87.3% of the 7,211 WCPSS students who took the high school Algebra 1 End-of-Course (EOC) test scored proficient. In WCPSS, most students score in Level III (proficient) or in the lower ranges of Level IV (above grade level). Few students score in the top half of Level IV.

In order to investigate teacher-related factors related to high performance in Algebra I, this project collected data to help teachers and district leadership understand current Algebra 1 practices, identify and share best practices in Algebra 1, build a series of studies that identify the role of teachers, and other system staff/departments in the school improvement process, and identify the practices of effective improvement.

Methods & Analysis

Forty-one (26%) of the 157 WCPSS high school Algebra I teachers in 2005-06 were identified for the study because they had also taught Algebra I for each of the prior three years. The analysis identified the nine most and nine least effective teachers based on average student residuals. These residuals are essentially the difference between a student's EOC scale score and the expected scale score of similar WCPSS students (a forthcoming full report on this study will include a detailed explanation of residuals).

Results/Teacher Effect

There was little difference between top teachers and bottom teachers' experience levels as Algebra I teachers. Compared to bottom teachers, the top teachers:

- averaged more instructional time spent on new material (68%; bottom teachers 36%);
- set their own pace;
- remediated within the context of presenting new material (instead of stand-alone remediation);
- spent more time in technology and small groups;
- planned more with other teachers;
- stressed linear regression and problem solving more often;
- sought to learn of others' programs;
- shared ideas for improvement, while bottom teachers were more concerned with personal and management problems.
- communicated student expecations clearly;
- were more purposeful with homework; and
- had an atmosphere of mutual respect in class.

Behaviors in Top Schools

Top schools in terms of Algebra I performance had a strong experienced course leader and support structures were in place for all teachers, with special considerations for new teachers. The schools had a school-wide plan that was aligned to the standard course of study. Materials were ready for the entire school year, and materials and class time were used thoughtfully.

Conclusions

Through this study methodology, it is possible to identify teachers who are successful with students at all levels: Recommendations for teachers include focusing on the NC Standard Course of Study, using data to reflect on their practices and strategies, and to plan with other teachers. Recommendations for school leaders include the development of a school-wide plan for teaching Algebra, the sharing of data with teachers, and the development of a scheduling plan that maintains stability in terms of who teaches Algebra I and to whom while allowing for changes over time and teacher growth opportunities.

HIGH SCHOOL REDESIGN

(full report available at http://www.wcpss.net/evaluation-research/reports/2006/0505hs_redesign.pdf)

Wake County Public School System (WCPSS) administrators recognized a need for high school redesign to better meet the needs of a changing society and economy, and began investigating and discussing possible improvements several years ago. Among top considerations were ways to increase opportunities for students to take more rigorous courses and reach more rigorous graduation requirements. After identifying a variety of means to increase the rigor and the relevance of coursework, and ways to develop closer student-staff relationships, eleven high schools in 2003-04 transitioned to a 4x4 block schedule (four courses in each of two semesters per year). Efforts were expanded in 2004-05 toward strengthening rigor, relevance, and relationships in all 19 high schools by providing:

- an increased number of advanced, rigorous courses;
- more in-depth training on differentiation of instructional practices, modified lesson pacing guides, and professional learning community development to more fully engage students and make the learning process more relevant; and
- a stronger emphasis on personalization, such as ninth-grade transition efforts, to develop stronger student/staff relationships.

A study by the WCPSS Evaluation and Research Department provided the school system with a progress report on the redesign efforts (Reichstetter, 2006a). The study compared the 2004-05 school year with the 2002-03 school year and found generally promising results. We found an increase in more rigorous academic opportunities and in the numbers of advanced course enrollees. Generally stable or higher academic success followed in End-of-Course exams, grade point averages, and credits earned. Instructors were using a wider variety of instructional practices for greater relevance and were promoting stronger student-staff relationships. In survey results, fewer discipline concerns were reported by the majority of student and teacher respondents, and students reported feeling more connected with their schools. In 2004-05, however, dropout and suspension rates did not decline. Highlights from the July 2006 report follow.

Rigor

A number of new, challenging advanced courses provided students with more opportunities to meet the more rigorous graduation requirements. Academic opportunities continued to increase, evidenced in 142 new advanced courses (in addition to the 23 new advanced courses in 2003-04) and in a 57% increase in higher-level course enrollees compared to a student membership increase of 13%

Increased rigor was evident in the 2004-05 school year compared to 2002-03, evidenced in a 2.8% increase (to 49.9%) in students with a 3.0 or higher grade point average, an increase to 6.66 from 5.65 in average number of credits earned, and in the average SAT score for WCPSS up 8 points, to 1075, and a 24% increase (to 10,804) in the number of Advanced Placement (AP) course enrollees with the most common AP scores at 4 or 5.

Relevance

Students were more fully engaged in their use of time in school and in coursework that was more meaningful, relevant, and supportive of students' school, lives, and future plan needs. Increasing the number and availability of higher-level standard and advanced courses gave students greater opportunities to enroll in courses more closely matched to their needs and interests, placing more relevance into their studies. Too, the mix and frequency of instructional practices changed to include a wider variety of instructional activities. Teachers centered their instruction using the research-based strategies (e.g., identifying similarities and differences, cooperative learning, setting objectives and providing feedback, and cues, questions, and advance organizers) outlined by Marzano, Pickering, and Pollock (2001).

These changes likely influenced students in their being more fully engaged in learning and in expressing generally positive satisfaction with their course opportunities and coursework, and with their daily schedule.

Dropout rates increased, however, from 2.8% in 2002-03 to 3.7% in 2004-05. (Note that 2002-03 data entry issues in first-year NCWISE database implementation may have resulted in artificially low rates that year.)

Relationships

More than 80% of surveyed teacher respondents reported implementing personalization strategies to build staff and student relationships and facilitate greater connection between students and their schools. Indications were that some positive impact was achieved. Some indicators (e.g., fewer discipline concerns and students stating they often or sometimes felt like a part of their school) suggested improved climate at schools, while some indicators remained stable.

WCPSS PROFESSIONAL LEARNING COMMUNITIES (PLC) DEFINITION

PLCs are one way to build collaboration among school faculties, which can lead to improved school outcomes for students (Reichstetter, 2006b).

WCPSS is searching for ways to hold higher expectations for students, improve instructional practices, and increase student learning and achievement outcomes. One of the WCPSS superintendent's four strategic directives focuses on teaching and learning, and professional learning communities (PLCs) are being stressed as a method to promote improvement. PLCs could support the following practices that are related to effective schools and successful improvement initiatives:

- indicators of a productive school culture:
    - tendency toward student-centered instruction, high expectations for students, and focus on improvement
    - work behavior that centers on collaboration
    - professional productivity

  (Georgiades et al., as cited in DuFour & Eaker, 1998, pp. 70-71)

- characteristics of effective schools:
    - safe and orderly environment of cooperation and respect that is purposeful and businesslike
    - climate of high expectations for success incorporating a variety of instructional strategies
    - communicative and widely dispersed instructional leadership
    - clear and focused mission, responsive to student needs
    - opportunity to learn and student time on relevant and valued tasks
    - student progress frequently monitored through a variety of evaluation measures
    - trusting and communicative home-school relations

  (Lezotte, as cited in DuFour & Eaker, 1998, pp. 71-72)

WCPSS is emphasizing the development and implementation of PLCs. Schools are at various stages of implementation. The first step has been to gain a clear understanding of the characteristics, elements, and attributes of PLCs. A recent review of the literature by the WCPSS Evaluation and Research Department focused on defining the term *professional learning community (Reichstetter, 2006b).* Through principals' meetings and discussions, a system-wide definition was agreed upon by using the review as a guide:

> A professional learning community is made up of team members who regularly collaborate toward continued improvement in meeting learner needs through a shared curricular-focused vision. Facilitating this effort are:
>
> - supportive leadership and structural conditions,

- collective challenging, questioning, and reflecting on team-designed lessons and instructional practices/experiences, and
- team decisions on essential learning outcomes and intervention/enrichment activities based on results of common formative student assessments.

E&R will be monitoring school status in terms of implementation of PLCs.

DISCUSSION

Looking across the various indicators of test performance, persistence, and academic rigor for WCPSS high school students that are reviewed in this report, many indicators point toward the relative success of WCPSS high school students. Student achievement remains high compared to state and national results, and an increasing number of students are pursuing rigorous AP coursework in high school. In addition, the skills and abilities that WCPSS graduates obtain appear to serve them well in the UNC system, which is the most common post-high school educational destination for WCPSS graduates.

Results in the most recent years, however, along with the current changes in the demography of the WCPSS student population, foreshadow difficulties ahead in terms of the system maintaining and increasing the current performance levels on these indicators. The explosive growth being experienced in Wake County is well-chronicled, and it is putting significant strain on the school system's infrastructure. On top of that, however, many of the student subgroups who have historically had the most difficulty reaching standards – such as students with limited English proficiency and students from lower-income homes – represent the fastest-growing populations among the WCPSS student body. As students from these subgroups come to occupy larger and larger proportions of the overall student population, the challenges inherent in helping those students acquire the skills and knowledge they need to be successful will continue to mount. The "leveling off" of results on many of the achievement-based indicators in this report in recent years may in fact related to this shifting population trend, which has been underway for the last few years. Schools will clearly need new strategies and new approaches for educating these students if the high levels of performance to which WCPSS has become accustomed are to be maintained and increased in the coming years.

Changes in the standards themselves are also beginning to affect overall student outcomes at the high school level. As the state is launching new tests at the high school level (e.g., U. S. History and Civics and Economics in 2005-06), standards are being raised such that the passing rates on those tests are being set lower to push students to perform at higher levels. According to information being released by the state Department of Public Instruction, results on the four tests that are being re-scaled in 2006-07 – Algebra I, English I, Geometry, and Algebra II – are likely to result in lower proficiency levels than were seen on those tests in the past. In 2007-08, the same process will play out with new tests in the science courses.

As the standards are being reset on these tests, not only are the overall passing rates dropping, but they are dropping disproportionately. For example, the achievement gaps among ethnic groups on the two new EOC tests implemented in 2005-06 are among the largest gaps on any high school EOC test. When standards are raised, it is those students who would otherwise be just "getting by" on those tests who are most dramatically affected. By and large, those students who are passing tests by small margins are more likely to come from the same subgroups which historically have a more difficult time passing those tests to begin with. Therefore, it can be anticipated that rising standards on these EOC tests will affect some student subgroups more than others.

Another change that is underway as these test standards are rising is the change in graduation requirements which the state has put into effect beginning with the incoming 9th grade class of 2006-07. Beginning with that cohort of students, a passing score will be required on five EOC tests in order to earn a diploma – Algebra I, English I, Biology, U. S. History, and Civics and Economics. As this requirement begins to roll out starting with this year's freshman class, the path to graduation will become significantly more difficult for many students. Current passing rates on some of these tests are below 50% for several subgroups of students, including Black/African-American students, Hispanic/Latino students, students with disabilities, students from lower-income backgrounds, and students with limited English proficiency. Coincidentally, many of these same subgroups are the ones that are growing in number and proportion in the WCPSS student population, and many of them are also the ones who were less likely to graduate and more likely to be retained in grade and drop out, even before these new requirements were established.

As standards are being raised for students, so too are standards for schools under the state's accountability model. A new, more rigorous growth model implemented in 2005-06 resulted in fewer schools meeting growth standards than in the past. The re-setting of standards on the Algebra I and English I tests will also affect school accountability by making it tougher for schools to meet Adequate Yearly Progress (AYP) targets. Although the state is expected to lower those high school AYP performance targets to accommodate the anticipated lower passing rates on those new tests, this only postpones the inevitable. The current federal requirement of having all students proficient by 2014 means that lowering targets now will require much sharper increases in those targets later on in order to stay on track.

The change in student population that WCPSS continues to undergo, coupled with rising standards on EOC tests and new graduation requirements are all coming together to portend a kind of "perfect storm", the brunt of which will undoubtedly be felt in the next couple of years. Many of our most vulnerable students – those who have historically been unsuccessful at higher rates on most academic indicators – are precisely the ones who are going to be the most dramatically affected by these changes. In addition, increasing outcomes for these students must also occur while simultaneously challenging those students who are already meeting standards and who need to be pushed to achieve to their maximum potential. Knowing this, WCPSS has begun to engage in a variety of initiatives to identify and propagate effective strategies for working with students who are having difficulties meeting expectations in the classroom and on state assessments. A sampling of these efforts was presented in the prior section of this report. In the face of these new circumstances, the type of effort that will be required to maintain and expand upon the high levels of achievement that have become the hallmark of WCPSS is probably unprecedented, and will have to encompass not just high schools, but schools at all levels in addition to significant community resources. Ways of doing business which have served students' needs in the past may no longer be sufficient. WCPSS must continue to pursue new strategies to promote teaching and learning for all students, new ways of focusing resources, and new ways of reaching students and families in order to rise to the challenges that are looming on the horizon.

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