

2009 SAT REPORT

October 2009

Department of Accountability

INFORMATION
FOR



DECISION-MAKING

ALEXANDRIA CITY PUBLIC SCHOOLS

2009 SAT REPORT

October 2009

Department of Accountability

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2009 SAT Report Executive Summary

This report describes the SAT performance for the graduating class of 2009 at T. C. Williams High School. The SAT is intended to be a reasoning test that measures the kinds of skill needed for college. Most college bound students take the test, as many colleges and universities use the scores as part of their college admissions process. The report is divided into five sections, including a narrative and four quantitative chapters. The data for each chapter were drawn from the SAT Questionnaire which students voluntarily chose to complete when registering for the SAT.

Summary of Findings

The findings in this report are varied, showing some strengths and many areas of concern. Scores on the three SAT reasoning tests decreased from 2008 (12 points for reading; 19 points for math, 10 points for writing). Five-year trends indicate a two point gain in reading a seven point decrease in mathematics, and a 26 point decrease in writing (over four years).

Students' performance on the SAT subject tests continues to be an apparent strength with a higher percentage (20%) of ACPS students than Virginia (15%) on the nation (19%) completing these one-hour academic-specific tests. Of the eight tests taken in common, with five or more test takers ACPS, exceeded Virginia four times and the nation five times. Scores on the Molecular Biology test were more than 100 points above the national average.

Areas of concern begin with the average combined SAT scores for ACPS continuing to be lower than Virginia and the nation. This status is a function of the large score gap between ACPS Whites, Blacks, and Hispanics. This concern is further underscored by the within-ethnic group comparisons documenting that only ACPS White students exceed their state and national counterparts. Save Black students on the writing test, all other ACPS ethnic groups consistently score lower than either their state or national counterparts.

Other demographic comparisons echo the ethnicity comparisons. ACPS English Language Learners (ELL) score lower than their state and national counterparts, whether their first language was other than English, or if they learned English and another language at the same time. ACPS students with family incomes below \$30,000 score lower than their state and national counterparts on the Reading and Math tests.

Ethnic group differences are a consistent theme in ACPS and SAT performance was no different. This disparity was also observed in the total years of study. Total years of study for SAT test takers were calculated by summing the average years of study in Art and Music, English, Foreign Language, Math, Science, and History. On average, Whites and Asians had the highest average years of study, followed by Hispanics and Blacks. These trends have been consistent over the past five years. Results also revealed that while students across the family income spectrum took the SAT, students whose families were in higher income brackets consistently outperformed other students.

The report concludes with four recommendations to: 1) enhance SAT preparatory programs, 2) focus on academic language, 3) inform students of college entrance requirements, and 4) enhance outreach efforts.

2009 SAT Report

Overview

This report describes the SAT performance for the graduating class of 2009 at T.C. Williams High School. This full report complements the 2009 SAT Digest that was distributed in August. The information included in this report is designed to provide a greater level of detail about the students who took the SAT and to delineate some of the factors, which may have contributed to their performance on the test. In addition to providing detailed data about the class of 2009, when available, historical data for the past five years (2005-2009) are presented, as well as comparative data for the state of Virginia and the Nation.

The report is divided into six sections. First, a narrative is provided about the history of the SAT and the current characteristics of the test. The class of 2009 was the fourth class to have scores on the Writing sub test. Following this overview are four chapters of quantitative data and a final concluding chapter.

- The first chapter documents the demographic characteristics of the class of 2009 SAT test takers and the scores they received on the Reading, Math and Writing sections of the SAT.
- The second chapter documents the school performance and course participation profile of the test takers, such as their grades, GPA, class rank, and years of study in core content areas necessary for college.
- The third chapter describes the future aspirations, college goals and plans of the class of 2009 including their degree level goal and intended college major.
- The fourth chapter provides information about the SAT Subject Tests, students who took the test, how well they performed, and the number of tests taken by students.
- The final chapter concludes the report with four recommendations to: 1) enhance SAT preparatory programs, 2) focus on academic language, 3) inform students of college entrance requirements, and 4) enhance outreach efforts.

For each data chapter, key bullet points outline major themes extracted from the tables.

The data for each chapter were drawn from the SAT Questionnaire that students voluntarily chose to complete when registering for the SAT. This self-report information was combined with the scores each student received on all tests they chose to complete. As a result of the self-report format, the data collected are subject to potential inaccuracies (e.g., class grades, years of study). In addition, although all 367 test takers in the graduating class of 2009 chose to respond to the survey, not all students responded to all of the questions. Therefore, for each question, the actual number of respondents may differ. The frequencies calculated for each item are based on the number of respondents, not the number of test takers. Finally, it is important to keep in mind that this group of students was a select group of students at T.C. Williams and the data cannot be generalized to the entire graduating class. The students who took the SAT were likely planning to attend college, which makes them a select group. Students who do not have college aspirations typically do not take the test.

SAT Background and Description

The SAT is intended to be a reasoning test that measures the kinds of skills needed for college. Most college bound students take the test, as a large number of colleges and universities require that the test be taken and use the scores as part of their college admissions process. The SAT is seen as a common yardstick with which to assess students from different schools and backgrounds. As curriculum and instruction have changed over the years, so too has the SAT. The two most recent and important changes include when the test was 'recentered' in 1995 and the changes to the content and format of the SAT in 2005.

Recentering refers to the process the College Board undertook to recalibrate the scores earned by students. As more and more students began taking the SAT, as opposed to just the elite students, the average score for the Reading and Math sections began to decline below the midpoint (500) of the SAT scoring scale (200-800). A one-time statistical adjustment was employed to restore the distribution of scores to the center of the scale. This process set both the Reading and Mathematics means for the SAT at 500, with a standard deviation of 110. Further, scores earned now are only multiples of 10. All scores earned after this recentering process are reported with an 'R' suffix (e.g., 500R).

In addition to the recentering of the SAT scores, in response to various criticisms and to better reflect what students were learning in high school, the SAT was substantially revised in 2005. The test was made more difficult to reduce the number of perfect scores obtained by test takers, certain types of ambiguous questions were removed (e.g., analogies) and the former SAT II writing test was folded into the required components of the test, forming the basis for the new Writing section. Now, there are three 800- point subsection scores, for a new perfect SAT score of 2400 (versus the previous 1600).

SAT Critical Reading (previously known as the Verbal section and sometimes referenced as verbal in this report): This section tests a student's ability to read and understand text, from analyzing the points made in a paragraph to discerning the meaning of words used in context. It includes short and long reading passages and sentence-completion questions. Analogies were eliminated. It is 70 minutes long with two 25-minute sections and one 20-minute section.

SAT Math: This section covers the math that most students learn in 9th and 10th grade and often in early 11th grade. The new math section includes topics from third-year college-preparatory math such as exponential growth, absolute value, functional notation, and negative and fractional exponents. Quantitative comparisons were eliminated. This content change reflects current admissions standards that require high school students to complete three-years of math. It is 70 minutes long with two 25-minute sections and one 20-minute section.

SAT Writing: This section consists of an essay and multiple choice questions testing a student's skills in the mechanics of English including grammar, usage, and word choice. The essay requires students to take a position on an issue and use reasoning and examples to support their position. It is similar to the type of writing required on in-class essay exams. The test is 60 minutes with a 35-minute multiple choice section and a 25-minute essay.

Chapter 1: Student Demographics Summary

Quick View

Pages 8-33

Basic Tables: Tables 1-4, Figure 1

Gender: Tables 5-8, Figures 2-4

Ethnicity: Tables 9-16, Figures 5-13

Language Background: Tables 17-22

Family Income: Tables 23-28

Parent Education: Tables 29-34

- As noted in the 2009 SAT Digest, SAT scores for the T. C. Williams graduating class of 2009 were significantly lower than the previous year (see Table 1). All subtest scores were below the midpoint of the scoring scale (484, 474, and 483, for Reading, Math and Writing respectively). Total scores in VA and the Nation fluctuated very little (< 2 points). The average total SAT score for ACPS students was 80 points lower than students in VA and 68 points lower than the average score for students across the Nation. In past years, ACPS average scores were also significantly below VA and the Nation. For a comparison of ACPS to local metropolitan districts see Appendix 1.
- The score band detail (see Figure 1) shows a roughly normal curve, with students' scores clustered in the middle two score bands of 400-499 and 500-599 on each of the three sections.
- Approximately 56% of the graduating class took the SAT. This percentage is down over the past five years (see Table 2).
- The year in which students last took the SAT was most likely to be senior year (see Table 3). Students who last took the test as juniors, scored on average 63-points higher than students taking the test as seniors (see Table 4).
- More females at T.C. Williams took the SAT and the percentage of female test-takers was the highest it has been in 5 years (see Table 5). The gender difference between male and female test takers was 2% in 2008, as compared to 20% in 2009.
- Boys and girls mean scores were similar on the Reading section (see Table 6). However, boys outperformed girls on the Math section (by 48 points), while girls outperformed boys on the Writing section (by 21 points). Score distribution bands (see Figures 2-4) revealed differential score grouping patterns, although both girls and boys were most likely to score between 400-499. Higher percentages of boys, except for girls above 700 on writing, were evident in all of the other bands above 500.
- The overall pattern for boys and girls became less clear when gender breakdowns were examined by ethnicity (see Tables 12-14). For example, Asian females and Asian males had nearly identical scores on the Reading section, while White and Hispanic males outperformed their female counterparts by 21 and 10 points respectively. In contrast to other ethnicities, Black females scored nine points higher than Black males.
- Math results by ethnicity and gender were consistently tilted towards males. The within-ethnic gender difference ranged from a low of 16 for Blacks to an astounding 101

points difference for Hispanic. Writing results went the other way, with all female groups beating their male counterparts (from 11 to 28 points).

- Distributions of Reading, Math and Writing scores by ethnicity box plots display a consistent score differences between White, Asian, Black, and Hispanic students across all sections of the SAT. The 25th percentile for White students is typically above the 75th percentile for Black and Hispanic students
- In the ACPS, students whose language background is English Only outperformed, as expected, their counterparts who spoke another language or another language and English. ACPS had a larger portion of test takers who spoke another language (14%), than either VA (6%) or the Nation (10%) (see Table 21). ACPS students who spoke another language or another language and English scored lower than their counterparts in the state and the nation in each of the tested areas.
- Students across the family income spectrum took the SAT (see Tables 23-28). Students whose families were in higher income brackets generally scored better than students from families in lower income brackets.
- Compared to VA and the Nation, the profile of ACPS test takers differed on the family income variable (see Table 27). ACPS had a larger percentage of students take the SAT whose family income was below \$30,000 (22%, compared to 12% and 18% for VA and the Nation). ACPS students whose family incomes were below \$30,000 scored lower than students in VA and the Nation in similar family income brackets on the Reading and Math sections of the SAT. Writing scores within this group were similar for test takers in ACPS, VA, and the Nation. ACPS students with family incomes above \$100,000 bested their counterparts in the state and nation on both the Reading and Writing tests, however, on the Math test, they were behind both groups.
- The 2009 test takers were skewed toward the lowest of the three parental educational levels (High School Diploma, Bachelor's Degree and Graduate Degree). Differences can be noted on the SAT at each higher parental education level. For example, on the Reading test, students whose parents hold graduate degrees scored 142 points higher than students whose parents earned a high school or Associate's Degree.

Chapter 2: School Profile of SAT Test Takers Summary

Quick View

Pages 34-39

Grades and GPA: Table 35

High School Rank: Tables 36-40

Average Years of Study: Tables 41-46

- The majority of students who took the SAT were 'A' or 'B' students, as seen by their typical grades and average GPA ($x = 3.07$). Only a few students with an average below 'C' took the SAT (see Table 35).
- In regard to class rank, in the past SAT takers were more likely to be in the top tenth or second tenth of their class, the current class of 2009 SAT participants is more equitably distributed.
- Class rank was a clear indicator of how well a student did on the SAT. The difference between students in the top tenth of their class and students in the second tenth of the class were 127, 89, and 121 points for reading, math and writing tests respectively (see Tables 37-39).
- Across the four core subject areas (English, Math, Science and History), students averaged almost four years of study, while students typically had three years of foreign language study and two years of Art and Music. The years of study per subject area has remained relatively constant over the past five years, with minor fluctuations (see Table 41). The years of study by T.C. Williams High School students were comparable to those of other students in Virginia, (see Table 42) and exceeded those of students in the Nation.
- There were ethnic differences in the years of study devoted to some courses, but not others (see Table 44). For example, the years of study in English, Math and History were comparable across subgroups, although there was a slight decrease in the years of English study for Hispanic students in 2009. White, Asian, and Black students were likely to have more course work devoted to Art and Music, than Hispanic students. Black students were least likely to spend time studying a foreign language when compared to Whites, Asian, and Hispanic students.
- Total years of study were calculated by summing the average years of study in Art and Music, English, Foreign Language, Math, Science and History. On average, in 2009, White students had 2.6 more years of study academic than Black students, 2.6 more year of study than Hispanic students, and 2 more years of study than Asian students. These trends have been consistent over the past five years.

Chapter 3: SAT Test Takers Future Aspirations and College Plans Summary

Quick View

Pages 40-45

Student College Aspirations: Tables 47-50

Desired Types of Colleges: Tables 51-55

College Plans: Tables 56-57

- The vast majority (89%) of students who took the SAT were planning to attend a four year college, with 3% of students undecided (see Table 47).
- The class has high aspiration with 58% desiring to earn a masters or doctoral degree. Twenty percent were undecided. Degree level goals of the ACPS graduating class were similar to those of other students in VA and the Nation (see Table 48).
- The class of 2009 had a wide variety of interests for their college major. The distribution of potential majors mirrored that of the state and nation, with two exceptions, slightly more ACPS students were interested in Arts or Humanities, Business, Commerce, or Communication and slightly fewer ACPS students were interested in Biological or related sciences and Physical Science or related sciences. (see Table 49).
- Almost half of students (49%) expected that based on their high school course work they would be awarded at least one advanced placement or exemption in college.
- In regard to type of college the students hope to attend, 71% hoped to attend a coeducational college or university. With the exception of students who were undecided (88%), the majority of students expected to attend a public university (73%) and preferred a city setting (38%, with 22% undecided). Sixty-three percent expected to go to college close to home or in Virginia. Most students planned to live on campus (72%).
- Seventy-seven percent of students planned to apply for financial aid. The percentage of students in ACPS who planned to apply for financial aid is the highest of the past five years. (see Table 56).
- Sixty-one percent of ACPS students planned to work part-time during college; 31% were undecided.

Chapter 4: SAT Subject Tests Summary

Quick View

Pages 46-48

Subject Test Takers: Tables 58 and 59

Subject Test Scores: Tables 60 and 61

- A higher percentage (20%) of T. C. Williams SAT test takers also took a Subject Test, compared to test takers in Virginia (15%) or the Nation (19%), although the percentage represented less than a quarter of the SAT test takers.
- The majority of ACPS students who took a subject test, took more than one (97%), with 44% taking three or more subject tests (see Table 59).
- The most common subject tests taken were; United States History, Literature, Mathematics Level I, Biology M, Mathematics Level II, and Chemistry. Seven or less students took each of the other SAT Subject Tests.
- Average scores on all SAT Subject Tests were greater than 555. Moreover, for students who took SAT Subject Tests, their average scores on the three SAT core sections were also greater than 600.
- ACPS students' scores on Biology E and Biology M were, 99 and 102 points higher than scores of students across the Nation.

TABLE 1
 Alexandria City Public Schools
 2009 SAT Results^a
 Recentered Mean SAT Scores for ACPS, VA and the Nation 1989-2009

Year	Alexandria				Virginia				Nation			
	Reading	Math	Writing	Total	Reading	Math	Writing	Total	Reading	Math	Writing	Total
2009	484	474	483	1,441	511	512	498	1,521	501	515	493	1,509
2008	496	493	493	1,482	511	512	499	1,522	502	515	494	1,511
2007	490	491	481	1,462	511	511	498	1,520	502	515	494	1,511
2006	512	509	509	1,530	512	513	500	1,525	503	518	497	1,518
2005	482	481		963	516	514		1,030	508	520		1,028
2004	483	474		957	515	509		1,024	508	518		1,026
2003	493	495		988	514	510		1,024	507	519		1,026
2002	485	491		976	510	506		1,016	504	516		1,020
2001	478	485		963	510	501		1,011	506	514		1,020
2000	477	476		953	509	500		1,009	505	514		1,019
1999	481	480		961	508	499		1,007	505	511		1,016
1998	475	478		953	507	499		1,006	505	512		1,017
1997	476	488		964	506	497		1,003	505	511		1,016
1996	501	505		1,006	507	496		1,003	505	508		1,013
1995	496	494		990	504	494		998	504	506		1,010
1994	491	490		981	501	495		996	499	504		1,003
1993	477	481		958	502	495		997	500	503		1,003
1992	494	499		993	501	494		995	500	501		1,001
1991	510	500		1,010	501	493		994	499	500		999
1990	515	521		1,036	501	496		997	500	501		1,001
1989	522	516		1,038	507	498		1,005	504	502		1,006

^a The writing subtest was new in 2005-2006. As a result the total test score maximum is now 2400.

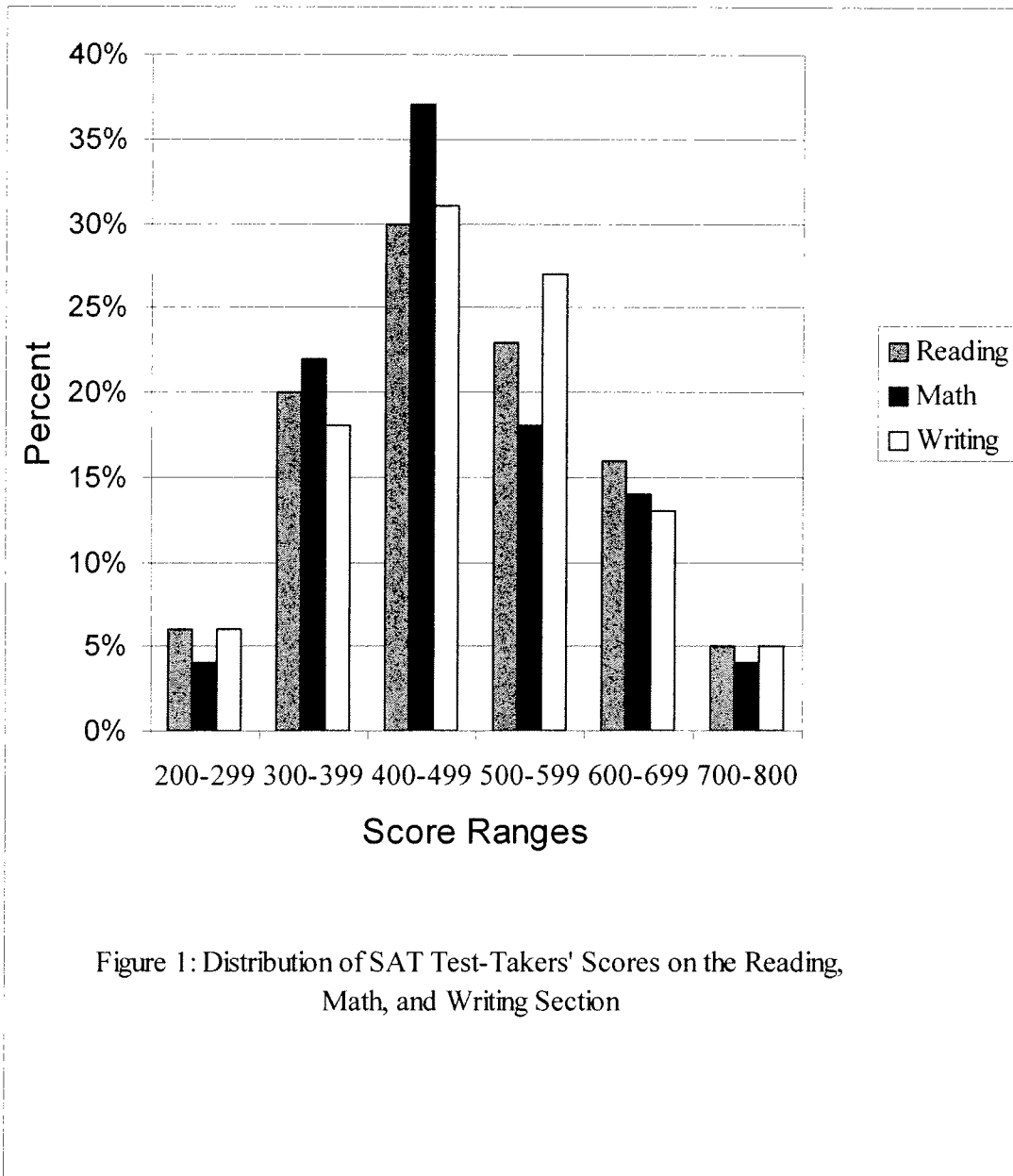


Figure 1: Distribution of SAT Test-Takers' Scores on the Reading, Math, and Writing Section

TABLE 2
 Alexandria City Public Schools
 2009 SAT Results
 Number and Percentage of the ACPS Seniors Who Took the SAT^a (2005-2009)

	2005	2006	2007	2008	2009
SAT Test Takers	376	350	398	402	367
Percentage of Graduating Seniors taking the SAT	65%	63%	65%	63%	56%

^a Graduating students could have taken the test as freshman, sophomores, juniors or seniors

TABLE 3
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers by When They Last Took the SAT
 in ACPS (2005-2009)

Grade in which SAT last taken	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Senior	79%	79%	82%	78%	83%
Underclassman	21%	21%	18%	22%	17%

TABLE 4
 Alexandria City Public Schools
 2009 SAT Results
 Mean Reading, Math and Writing Scores by Grade in Which SAT was Last Taken

Grade in which SAT last taken	Number	Reading	Math	Writing
Senior	305	474	463	473
Junior	61	534	530	535
Sophomore	1	^a	^a	^a

^a Scores for subgroups containing fewer than 5 students are not reported.

TABLE 5
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Male and Female SAT Test-Takers in ACPS (2005-2009)

Gender	2005	2006	2007	2008	2009
Male	41% (n=155)	47% (n=163)	47% (n=188)	49% (n=195)	40% (n=146)
Female	59% (n=221)	53% (n=187)	53% (n=210)	51% (n=207)	60% (n=221)

TABLE 6
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Mean Scores for ACPS Students by Gender (2005-2009)

Gender	2005	2006	2007	2008	2009
Male	489	511	487	496	486
Female	478	512	492	496	482
All Students	482	512	490	496	484

TABLE 7
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Mean Scores for ACPS Students by Gender (2005-2009)

Gender	2005	2006	2007	2008	2009
Male	506	521	494	509	503
Female	463	498	487	478	455
All Students	481	509	491	493	474

TABLE 8
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Mean Scores for ACPS Students by Gender (2006-2009)

Gender	2006	2007	2008	2009
Male	497	474	484	470
Female	519	488	501	491
All Students	509	509	493	483

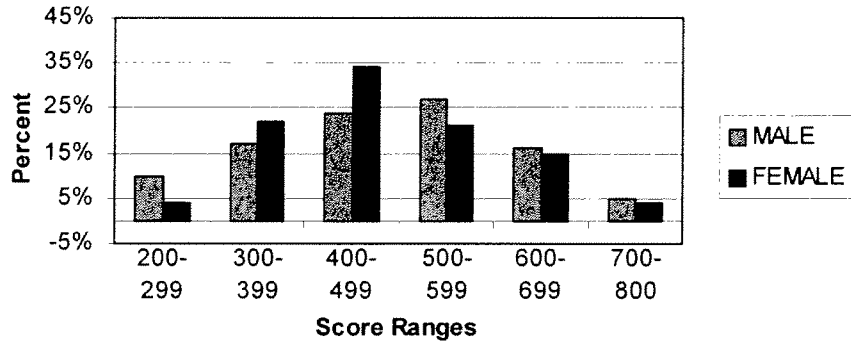


Figure 2: Distribution of Reading Scale Scores by Gender

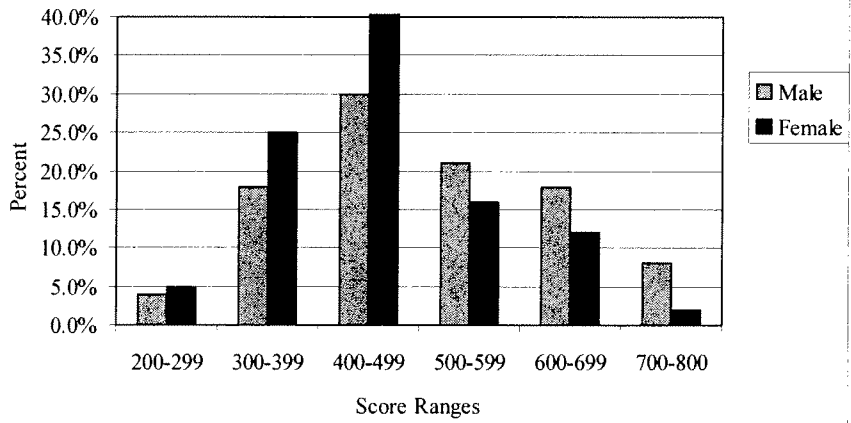


Figure 3: Distribution of Math Scale Scores by Gender

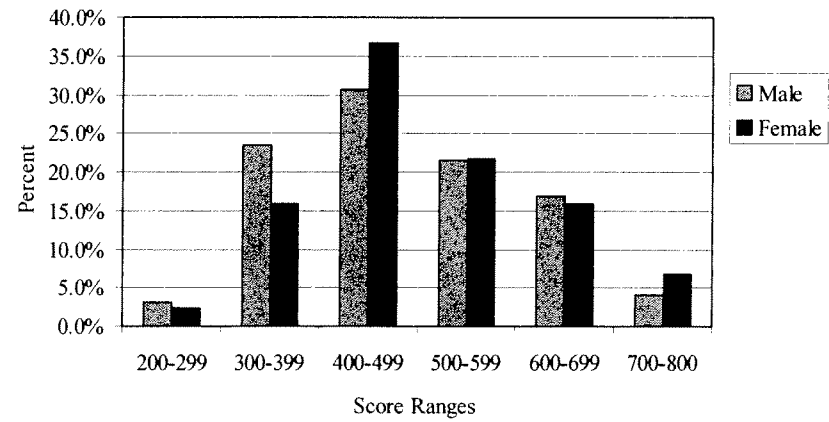


Figure 4: Distribution of Writing Scale Scores by Gender

TABLE 9
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Ethnicity^a (2005-2009)

Ethnicity	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
American Indian	<1% (n=1)	<1% (n=1)	1% (n=3)	1% (n=3)	<1% (n=1)
Asian	9% (n=32)	5% (n=16)	7% (n=26)	9% (n=37)	8% (n=28)
Black	41% (n=137)	33% (n=106)	33% (n=131)	38% (n=153)	46% (n=169)
Hispanic	9% (n=29)	11% (n=37)	14% (n=54)	12% (n=50)	10% (n=38)
White	34% (n=115)	43% (n=139)	32% (n=126)	31% (n=125)	26% (n=97)
Other	7% (n=24)	8% (n=26)	8% (n=33)	5% (n=20)	7% (n=25)
No Response	(n=38)	(n=25)	(n=25)	(n=14)	(n=9)

^a Test-Takers who did not specify an ethnicity (No response) are not included in the following Ethnic tables.

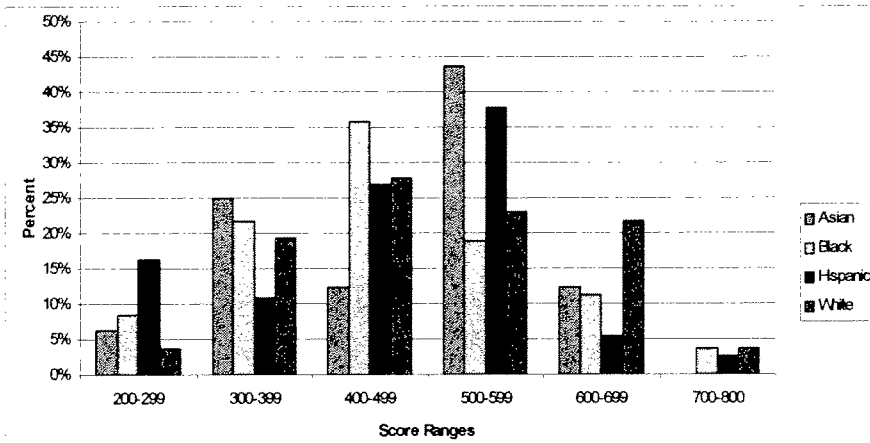


Figure 5: Distribution of Reading scale scores by ethnic background

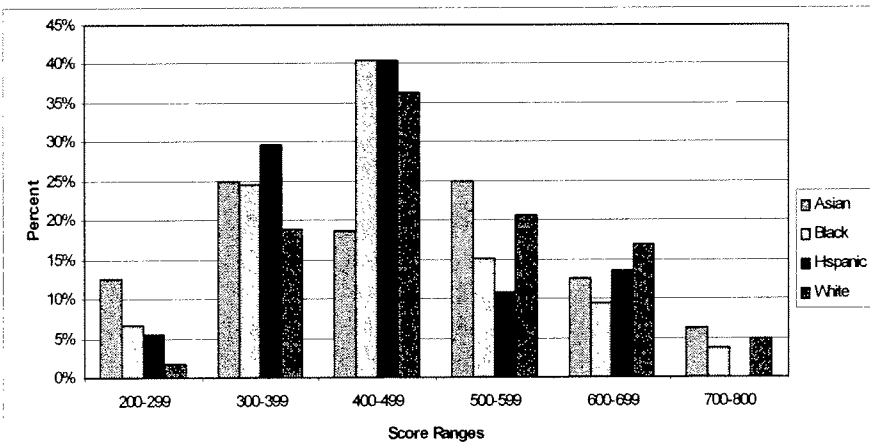


Figure 6: Distribution of Math scale scores by ethnic background

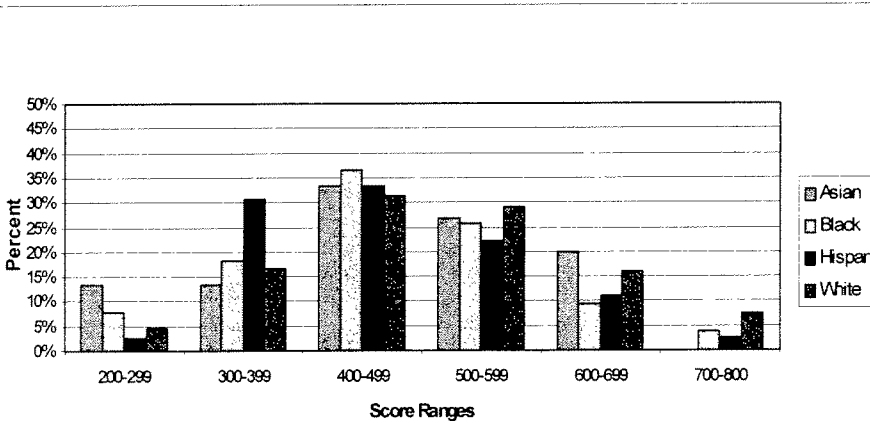


Figure 7: Distribution of Writing scale scores by ethnic background

TABLE 10
 Alexandria City Public Schools
 2009 SAT Results
 Gender/Ethnicity Percentage for ACPS Test-Takers

Ethnicity	Male (n=146)	Female (n=221)
American Indian	0%	0%
Asian	4%	4%
Black	16%	30%
Hispanic	3%	7%
White	11%	15%
Other	3%	4%
Total Percent	40%	60%

TABLE 11
 Alexandria City Public Schools
 2009 SAT Results
 Gender Breakdown within Ethnicity for ACPS Test-Takers

Ethnicity	Male	Female
American Indian (n=1)	100%	0%
Asian (n=28)	50%	50%
Black (n=169)	36%	64%
Hispanic (n=38)	32%	68%
White (n=97)	42%	58%
Other (n=25)	44%	56%

TABLE 12
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Mean and Standard Deviation for ACPS Students
 by Ethnicity and Gender^a (2005-2009)

Ethnicity and Gender	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Asian	447	106	468	84	482	128	492	143	481	142
Male	431	--	497	52	481	--	477	--	482	--
Female	466	--	444	99	483	--	519	--	481	--
Black	416	93	429	99	421	97	424	82	427	95
Male	435	101	423	102	419	108	409	82	421	106
Female	403	85	434	98	423	87	435	80	430	89
Hispanic	449	115	466	103	400	108	453	81	465	107
Male	459	--	469	109	449	--	455	--	472	--
Female	439	--	465	101	470	91	452	--	462	95
White	583	94	592	88	573	103	596	94	584	92
Male	583	92	580	92	564	106	605	91	596	84
Female	583	96	604	84	583	100	585	96	575	96
All Students	482	129	512	124	490	125	496	121	484	123
Male	489	124	511	123	487	130	496	129	486	132
Female	478	132	512	126	492	120	496	113	482	117

^a Ethnicity by gender subgroups with less than five students are not reported.

TABLE 13
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Mean and Standard Deviation for ACPS Students
 by Ethnicity and Gender (2005-2009)

Ethnicity and Gender	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Asian	492	112	558	126	527	107	530	125	514	123
Male	524	–	557	125	493	--	539	–	545	–
Female	455	–	558	134	551	--	516	–	482	–
Black	412	90	429	99	429	90	421	88	415	90
Male	438	90	446	88	429	88	418	103	425	103
Female	394	86	414	106	430	91	423	76	409	91
Hispanic	465	98	448	85	449	95	449	90	455	102
Male	487	–	470	89	447	--	463	–	525	–
Female	443	–	435	82	451	83	432	–	424	80
White	566	99	582	95	566	103	582	101	574	101
Male	585	81	578	108	569	109	607	90	616	101
Female	552	109	586	82	562	96	553	106	544	90
All Students	481	118	509	120	491	115	493	121	474	120
Male	506	109	521	116	494	120	509	130	503	130
Female	463	122	498	122	487	110	478	109	455	108

^a Ethnicity by gender subgroups that have less than 5 students are not reported.

TABLE 14
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Mean and Standard Deviation for ACPS Students
 by Ethnicity and Gender (2006-2009)

Ethnicity and Gender	2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Asian	473	89	473	110	486	131	498	117
Male	488	82	432	--	462	--	489	--
Female	463	97	503	--	526	--	507	--
Black	435	99	412	98	427	78	424	99
Male	418	103	401	102	407	80	412	111
Female	449	95	420	94	443	72	431	91
Hispanic	456	92	451	88	451	90	461	92
Male	422	93	455	--	450	--	454	--
Female	477	87	448	89	453	--	465	84
White	591	92	567	109	584	104	588	94
Male	570	95	553	119	582	100	571	88
Female	611	85	582	95	585	108	599	95
All Students	509	120	481	123	493	119	483	122
Male	497	121	474	129	484	121	470	124
Female	519	118	488	117	501	116	491	12

^a Ethnicity by gender subgroups that have less than 5 students are not reported.

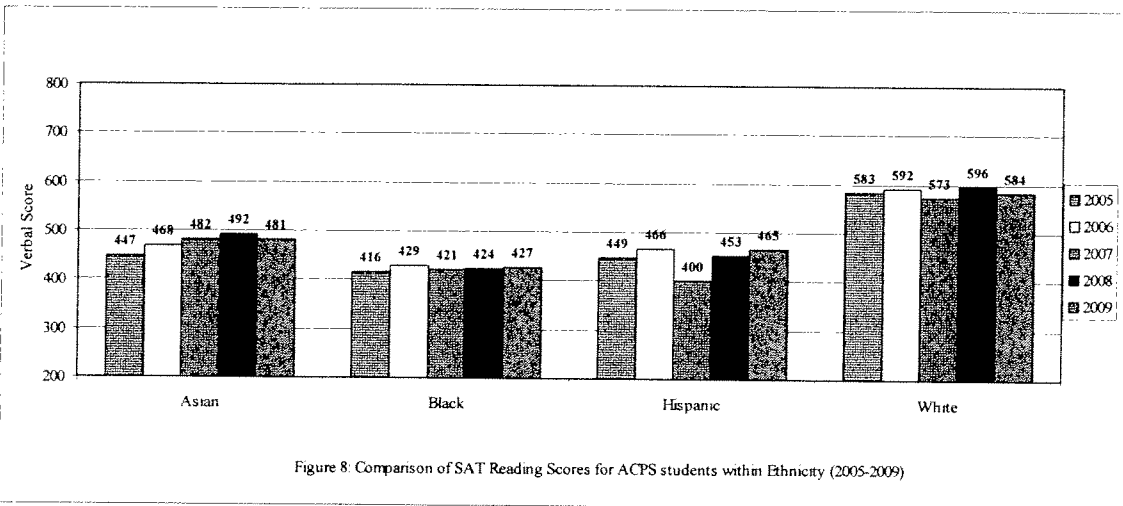


Figure 8: Comparison of SAT Reading Scores for ACPS students within Ethnicity (2005-2009)

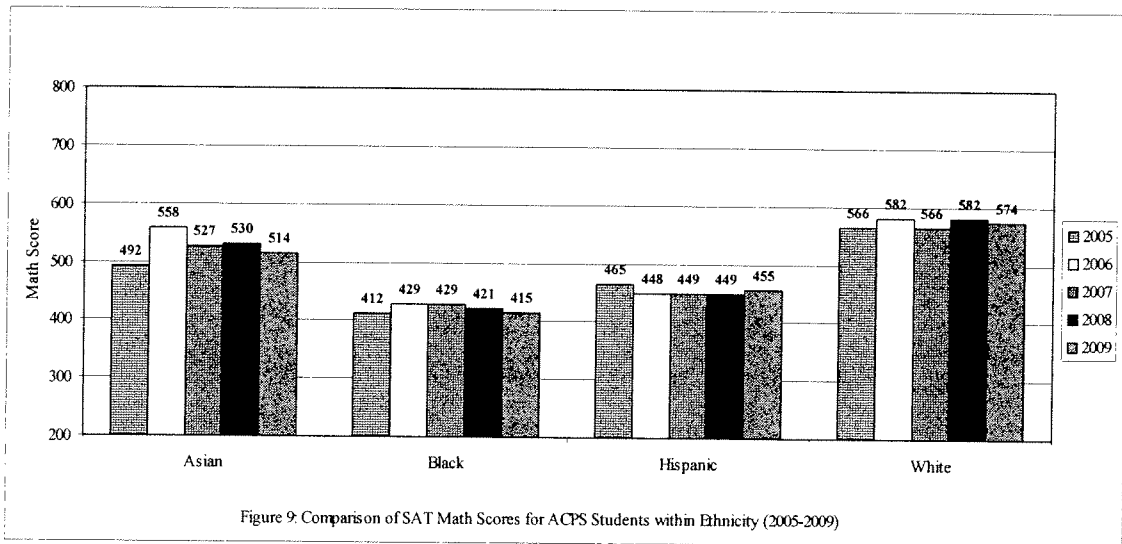


Figure 9: Comparison of SAT Math Scores for ACPS Students within Ethnicity (2005-2009)

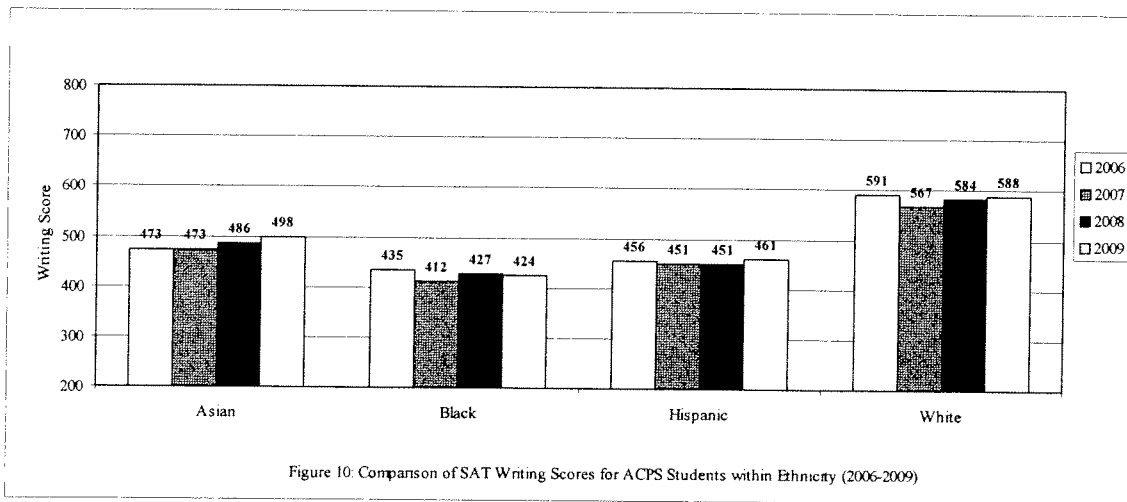


Figure 10: Comparison of SAT Writing Scores for ACPS Students within Ethnicity (2006-2009)

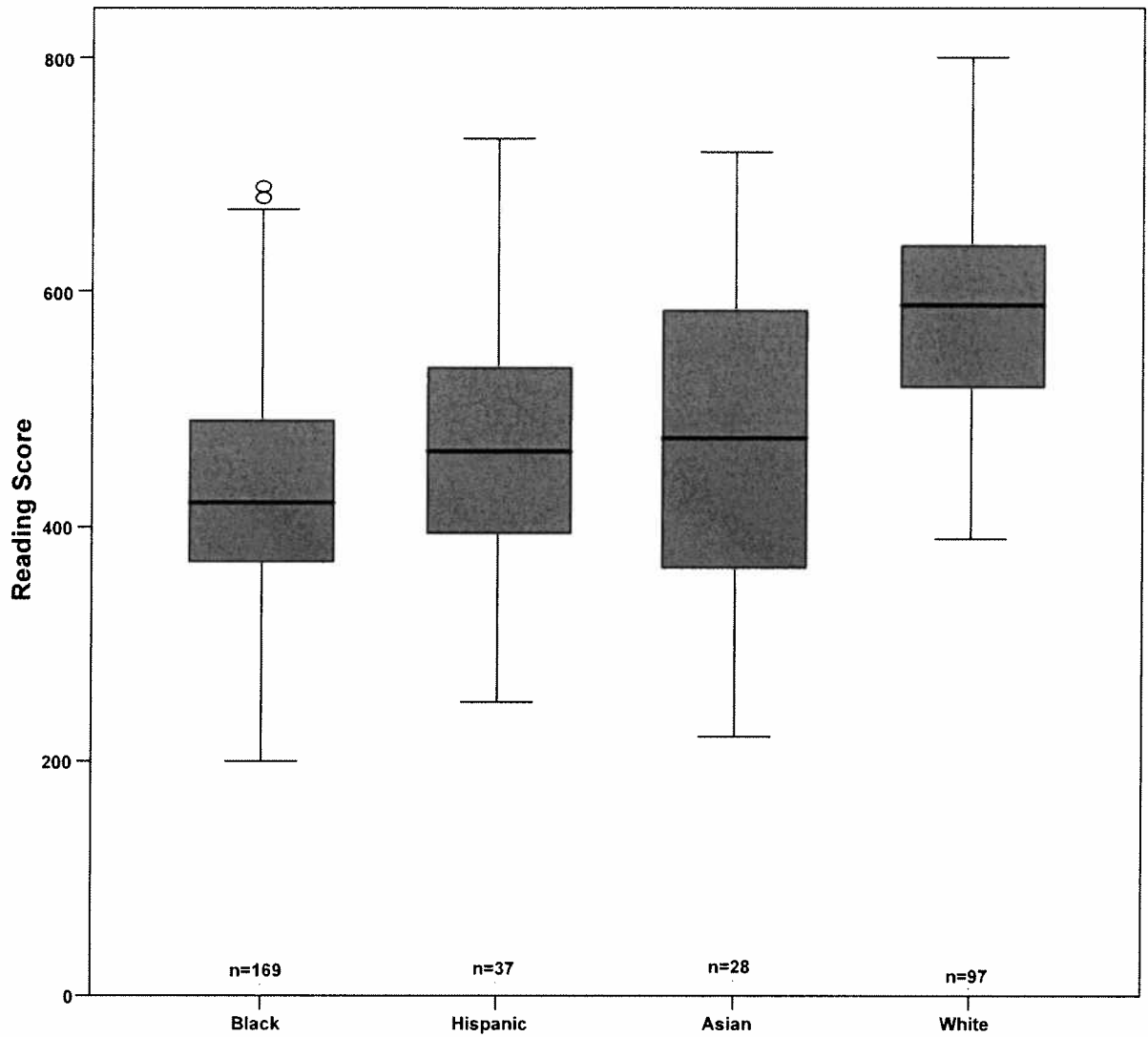


Figure 11. Boxplot Distribution of 2009 ACPS Reading Scores by Ethnicity

How to read a boxplot:

1. The black line, in the center of each box, is the 50th percentile or middle of the distribution of scores, which means that half of the scores are below that line and half are above it.
2. The lower and upper lines of the box represents the 25th and 75th percentile.
3. The lines extending from above and below the box show the range of scores.

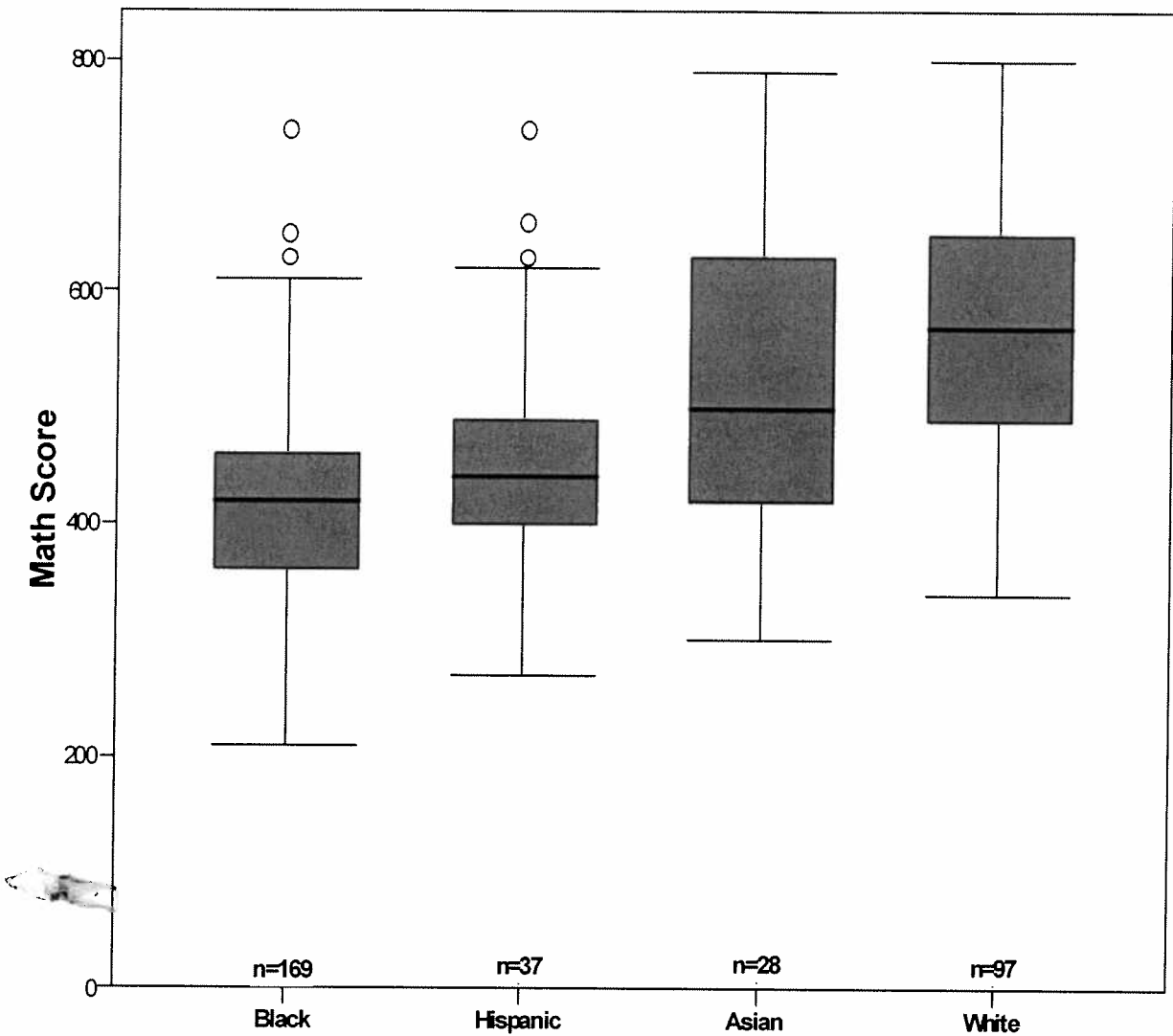


Figure 12. Boxplot Distribution of 2009 ACPS Math Scores by Ethnicity

How to read a boxplot:

1. The black line, in the center of each box, is the 50th percentile or middle of the distribution of scores, which means that half of the scores are below that line and half are above it.
2. The lower and upper lines of the box represents the 25th and 75th percentile.
3. The lines extending from above and below the box show the range of scores.

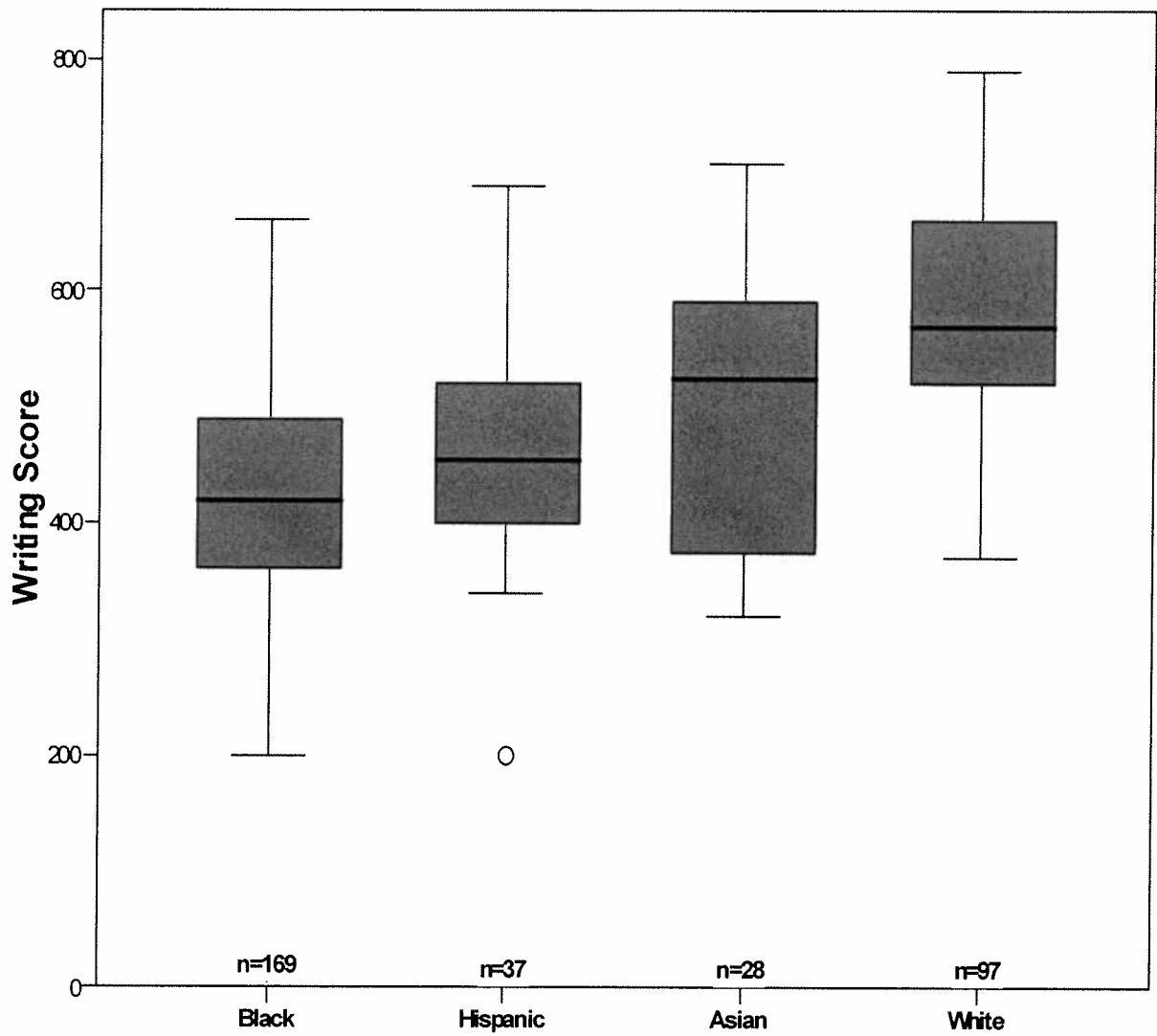


Figure 13. Boxplot Distribution of 2009 ACPS Writing Scores by Ethnicity

How to read a boxplot:

1. The black line, in the center of each box, is the 50th percentile or middle of the distribution of scores, which means that half of the scores are below that line and half are above it.
2. The lower and upper lines of the box represents the 25th and 75th percentile.
3. The lines extending from above and below the box show the range of scores.

TABLE 15
 Alexandria City Public Schools
 2009 SAT Results
 Ethnicity for SAT Test-Takers in ACPS, Virginia, and the Nation

Ethnicity	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
American Indian	0%	1%	1%
Asian	8%	8%	10%
Black	46%	19%	12%
Hispanic	10%	6%	13%
White	26%	60%	56%
Other	7%	3%	3%
No Response	2%	3%	4%

TABLE 16
 Alexandria City Public Schools
 2009 SAT Results
 Reading, Math and Writing Means for SAT Test-Takers in ACPS, Virginia, and the Nation by
 Ethnicity

Ethnicity	Reading			Math			Writing		
	ACPS	VA	Nation	ACPS	VA	Nation	ACPS	VA	Nation
American Indian	--	513	486	--	503	493	--	489	469
Asian	481	522	516	514	574	587	498	523	520
Black	427	433	429	415	427	426	424	423	421
Hispanic	465	491	455	455	489	461	461	478	448
White	584	536	528	574	533	536	588	520	517
Other	502	517	494	472	509	514	498	505	493
All Students	484	511	501	474	512	515	483	498	493

TABLE 17
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Language Background (2005-2009)

Language Background	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Another Language	16%	16%	16%	15%	14%
English & Another	16%	15%	17%	19%	20%
English Only	69%	69%	66%	66%	67%

TABLE 18
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Means and Standard Deviations for ACPS Students
 by Language Background (2005-2009)

Language Background	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Another Language	392	85	446	104	407	115	449	104	417	105
English & Another	438	105	452	99	480	108	455	104	456	103
English Only	516	125	546	118	513	121	509	117	505	125
All Students	482	129	512	124	490	125	496	121	484	105

TABLE 19
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Means and Standard Deviations for ACPS Students
 by Language Background (2005-2009)

Language Background	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Another Language	427	87	467	118	444	94	475	102	451	111
English & Another	454	98	470	94	469	109	471	111	455	98
English Only	504	117	530	121	509	116	494	120	485	126
All Students	481	118	509	120	491	115	493	121	474	120

TABLE 20
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Means and Standard Deviations for ACPS Students
 by Language Background (2006-2009)

Language Background	2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Another Language	454	92	413	96	458	103	444	111
English & Another	456	90	467	108	462	100	446	96
English Only	538	125	502	125	503	116	501	128
All Students	509	120	481	123	493	119	483	122

TABLE 21
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS, Virginia, and the Nation
 by Language Background

Language Background	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
Another Language	14%	6%	10%
English & Another	20%	10%	15
English Only	67%	84%	75%

TABLE 22
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading, Math and Writing Means for Students in ACPS, Virginia, and the Nation
 by Language Background

Language Background	Reading			Math			Writing		
	ACPS	VA	Nation	ACPS	VA	Nation	ACPS	VA	Nation
Another Language	417	483	467	451	536	524	444	489	472
English & Another	456	502	482	455	511	506	446	494	480
English Only	505	515	511	485	510	516	501	499	499
All Students	484	511	501	474	512	515	483	498	493

TABLE 23
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Family Income (2005-2009)

Family Income	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Below \$30,000	37%	28%	26%	25%	22%
\$30,000-\$50,000	16%	14%	17%	20%	20%
\$50,000-\$100,000	47%	58%	31%	27%	26%
\$100,00 and above	22%	37%	26%	28%	32%

TABLE 24
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Means and Standard Deviations for ACPS Students by
 Family Income (2009)

Family Income	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
0- \$20,000	388	101	408	--	423	90	416	111	415	116
\$20,000 – \$40,000	441	103	471	116	448	82	450	92	439	87
\$40,000 – \$60,000	445		461	--	446	--	462	100	487	101
\$60,000 – \$80,000	501		558	--	507	--	466	90	497	128
\$80,000 – \$100,000	527		558	--	550	134	514	--	537	--
More than 100,000	596	94	573	94	556	102	587	--	--	--
\$100,000 -- \$120,000									584	
\$120,000 – \$140,000									495	
\$140,000 – \$160,000									536	--
\$160,000 – \$200,000									535	-
More than \$200,000									579	--
All Students	485	135	512	124	490	125	496	121	484	123

TABLE 25
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Means and Standard Deviations for ACPS Students by
 Family Income (2005-2009)

Family Income	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
0-\$20,000	397	89	424	--	423	86	434	108	421	126
\$20,000-\$40,000	444	86	468	119	463	81	461	98	447	92
\$40,000-\$60,000	451	--	447	--	456	--	471	120	465	94
\$60,000-\$80,000	479	--	544	--	503	--	486	84	474	139
\$80,000 - \$100,000	516	--	555	--	561	108	524	--	512	--
More than \$100,000	586	97	565	100	550	111	548	--		--
\$100,000-- \$120,000									544	
\$120,000 – \$140,000									516	
\$140,000 – \$160,000									519	--
\$160,000 – \$200,000									534	-
More than \$200,000									548	--
All Students	481	118	509	120	491	115	493	121	474	120

TABLE 26
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Means and Standard Deviations for ACPS Students by
 Family Income (2006-2009)

Family Income	2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
0-\$20,000	400	--	418	76	426	101	442	105
\$20,000 -\$40,000	413	95	434	85	456	79	435	77
\$40,000 – \$60,000	442	--	459	--	448	99	476	106
\$60,000 – \$80,000	546	--	483	--	471	86	492	131
\$80,000 – \$100,000	510	--	545	132	506	--	528	--
More than \$100,000	569	105	551	106	564	--	--	--
\$100,000-- \$120,000							570	
\$120,000 – \$140,000							481	
\$140,000 – \$160,000							534	
\$160,000 – \$200,000							520	
More than \$200,000							601	
All Students	509	120	481	123	493	119	483	

TABLE 27
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS, Virginia, and the Nation
 by Family Income

Family Income	ACPS (n=367)	Virginia (n=59,573)	Nation (n=1,530,128)
Below \$30,000	22%	12%	18%
\$30,000-50,000	20%	13%	15%
\$50,000- 100,000	26%	36%	36%
Above \$100,00	32%	38%	32%

TABLE 28
 Alexandria City Public Schools
 2009 SAT Results
 Mean SAT Reading, Math and Writing Scores of Students in ACPS, Virginia, and the Nation
 by Family Income

Family Income	Reading			Math			Writing		
	ACPS	VA	Nation	ACPS	VA	Nation	ACPS	VA	Nation
Below \$30,000	419	443	443	430	445	462	439	432	437
\$30,000 – \$50,000	466	475	476	454	471	486	458	460	465
\$50,000- \$100,000	507	506	505	485	504	515	497	490	494
Above 100,000	559	544	538	537	545	552	557	531	530

TABLE 29
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Highest Level of Parental Education (2005-2009)

Highest Level of Parental Education	2005 (n=350)	2006 (n=362)	2007 (n=398)	2008 (n=402)	2009 (n=367)
High School Diploma or Associate's Degree	40%	35%	37%	36%	42%
Bachelor's Degree	23%	25%	26%	27%	25%
Graduate/Professional Degree	29%	33%	31%	32%	28%

TABLE 30
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Means and Standard Deviations for ACPS Students
 by Highest Level of Parental Education (2005-2009)

Highest Level of Parental Education	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
No HS Diploma	405	91	394	-	398	--	402	--	404	--
High School Diploma	420	100	415	103	444	104	425	91	431	98
Associate's Degree	449	-	410	-	470	--	468	--	434	--
Bachelor's Degree	515	120	486	101	500	119	500	99	507	110
Graduate Degree	515	120	556	100	569	116	564	112	573	107
All Students	482	132	483	124	490	125	496	121	484	123

TABLE 31
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Means and Standard Deviations for ACPS Students
 by Highest Level of Parental Education (2005-2009)

Highest Level of Parental Education	2005		2006		2007		2008		2009	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
No HS Diploma	406	94	406	--	385	--	426	--	454	--
High School Diploma	433	98	447	96	464	93	424	93	433	94
Associate's Degree	460	--	490	--	479	--	468	--	388	--
Bachelor's Degree	496	112	536	109	502	109	501	109	489	116
Graduate Degree	550	112	585	124	555	115	554	115	546	111
All Students	481	118	509	120	491	115	493	115	474	120

TABLE 32
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Means and Standard Deviations for ACPS Students
 by Highest Level of Parental Education (2006-2009)

Highest Level of Parental Education	2005		2006		2007		2008	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
No HS Diploma	408	--	388	--	427	--	423	--
High School Diploma	447	99	434	105	425	83	433	98
Associate's Degree	467	--	447	--	454	--	450	--
Bachelor's Degree	546	101	502	114	493	104	498	121
Graduate Degree	583	102	555	115	559	112	567	106
All Students	509	120	481	123	493	119	483	122

TABLE 33
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS, Virginia, and the Nation
 by Highest Level of Parental Education

Parental Education	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
HS or Associate's Degree	42%	37%	40%
Bachelor's Degree	25%	31%	30%
Graduate Degree	28%	29%	25%

TABLE 34
 Alexandria City Public Schools
 2009 SAT Results
 Mean SAT Reading, Math and Writing Scores of Students in ACPS, Virginia, and the Nation
 by Parental Education

Parental Education	Reading			Math			Writing		
	ACPS	VA	Nation	ACPS	VA	Nation	ACPS	VA	Nation
HS or Associate's Degree	431	469	468	429	469	478	435	455	457
Bachelor's Degree	507	524	521	489	525	535	498	511	512
Graduate Degree	573	565	559	546	562	572	567	551	552

TABLE 35
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS By High School Grades and GPA (2005-2009)

High School GPA	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
A (90-100)	28%	33%	28%	32%	29%
B (80-89)	50%	48%	48%	46%	47%
C (70-79)	22%	19%	24%	21%	24%
D (60-69)	0%	0%	1%	0%	1%
Average GPA	3.08	3.17	3.09	3.16	3.07

TABLE 36
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by High School Rank (2005-2009)

High School Rank	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Top Tenth	24%	32%	28%	29%	33%
Second Tenth	26%	28%	25%	29%	23%
Second Fifth	21%	19%	19%	18%	21%
Final Three Fifths	29%	21%	28%	24%	24%

TABLE 37
 Alexandria City Public Schools
 2009 SAT Results
 SAT Reading Mean Scores for the ACPS Students by High School Rank (2005-2009)

High School Rank	2005	2006	2007	2008	2009
Top Tenth	606	621	614	590	619
Second Tenth	501	527	520	511	492
Second Fifth	444	471	494	484	471
Final Three Fifths	416	409	412	430	403
All Students	482	512	490	496	484

TABLE 38
 Alexandria City Public Schools
 2009 SAT Results
 SAT Math Mean Scores for the ACPS Students by High School Rank (2005-2009)

High School Rank	2005	2006	2007	2008	2009
Top Tenth	625	625	616	611	604
Second Tenth	514	529	528	517	515
Second Fifth	448	477	500	486	462
Final Three Fifths	412	405	420	431	390
All Students	495	509	491	493	474

TABLE 39
 Alexandria City Public Schools
 2009 SAT Results
 SAT Writing Mean Scores for the ACPS Students by High School Rank (2006-2009)

High School Rank	2006	2007	2008	2009
Top Tenth	621	596	602	619
Second Tenth	529	511	509	498
Second Fifth	476	483	483	473
Final Three FifthS	416	400	427	400
All Students	509	481	493	483

TABLE 40
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS, Virginia, and the Nation
 by Class Rank

High School Rank	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
Top Tenth	33%	30%	33%
Second Tenth	23%	26%	27%
Second Fifth	21%	20%	19%
Final Three Fifths	24%	23%	20%
Average GPA	3.07%	3.28%	3.32%

TABLE 41
 Alexandria City Public Schools
 2009 SAT Results
 SAT Test-Takers' Average Years of Study in Academic Areas (2005-2009)

Academic Area	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Arts and Music	1.8	1.8	2.2	2.2	2.2
English	3.8	3.8	3.9	3.9	3.9
Foreign Languages	3.0	3.0	3.0	3.0	3.2
Mathematics	3.8	4.0	3.9	4.0	4.0
Natural Sciences	3.5	3.7	3.7	3.7	3.8
Social Sciences	3.8	3.8	3.8	3.9	3.9
Total Years	19.7	20.1	20.5	20.7	21.0

TABLE 42
 Alexandria City Public Schools
 2009 SAT Results
 Average Years of Study in ACPS, Virginia, and Nation
 by Academic Area

Academic Area	ACPS	Virginia	Nation
Arts and Music	2.2	2.2	2.2
English	3.9	3.9	3.9
Foreign Languages	3.2	3.3	2.8
Mathematics	4.0	4.0	3.9
Natural Sciences	3.8	3.8	3.6
Social Sciences	3.9	3.9	3.6
Total Years	21.0	21.1	20.0

TABLE 43
 Alexandria City Public Schools
 2009 SAT Results
 Percent of Students in ACPS, Virginia, and Nation
 by Years of Study in Individual Academic Areas

Years of Study	ACPS	Virginia	Nation
Arts and Music, 1 or more	79%	79%	85%
English, 4 or more	85%	89%	87%
Foreign Language, 3 or more	78%	84%	61%
Mathematics, 4 or more	78%	83%	77%
Calculus	18%	26%	28%
Natural Sciences, 3 or more	98%	97%	92%
Social Sciences and History, 3 or more	98%	98%	93%

TABLE 44
 Alexandria City Public Schools
 2009 SAT Results
 Average Years of Study for ACPS SAT Test Takers
 in Academic Areas by Ethnicity (2005-2009)

Ethnicity	Arts and Music	English	Foreign Language	Math	Natural Science	Social Science	Total
Asian							
2005	1.3	3.6	2.9	3.7	3.3	3.7	19.3
2006	1.3	3.8	3.0	4.0	3.6	3.9	20.2
2007	1.9	3.8	3.2	3.9	3.8	3.8	20.6
2008	2.5	3.8	3.2	4.0	3.7	3.7	20.9
2009	2.1	3.8	3.3	4.0	3.6	3.8	20.6
Black							
2005	1.6	3.7	2.4	3.6	3.3	3.7	18.4
2006	1.6	3.8	2.4	3.7	3.3	3.7	18.5
2007	1.7	3.7	2.3	3.6	3.5	3.7	18.8
2008	1.6	3.9	2.6	3.8	3.6	3.8	19.3
2009	2.1	3.9	2.7	3.8	3.7	3.8	20.0
Hispanic							
2005	1.6	3.7	2.8	3.7	3.5	3.7	18.9
2006	1.0	3.6	3.1	3.7	3.8	3.8	19.3
2007	1.6	3.7	3.1	3.6	3.5	3.6	19.4
2008	1.8	4.0	3.0	3.9	3.9	4.0	20.6
2009	1.7	3.8	3.4	3.7	3.7	3.7	20.0
White							
2005	2.2	3.9	3.5	3.9	3.8	3.9	21.1
2006	2.2	3.9	3.5	4.0	3.9	4.0	21.6
2007	2.7	4.0	3.4	3.9	3.5	3.9	21.9
2008	2.7	3.9	3.3	4.0	3.8	3.9	21.6
2009	2.7	3.9	3.8	4.3	3.9	4.0	22.6
Division							
2005	1.8	3.8	3.0	3.8	3.5	3.8	19.7
2006	1.8	3.8	3.0	3.9	3.6	3.8	20.1
2007	2.1	3.8	3.0	3.8	3.7	3.8	20.4
2008	2.2	3.9	3.0	4.0	3.7	3.9	20.7
2009	2.2	3.9	3.2	4.0	3.8	3.9	21.0

TABLE 45
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Years of English Study (2005-2009)

Years of English Study	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Four Years or More	76%	84%	83%	86%	85%
Three Years	23%	12%	14%	14%	14%
Two Years	1%	3%	2%	0%	0%
Less Than Two Years	0%	1%	1%	0%	0%

TABLE 46
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS by Years of Mathematics Study (2005-2009)

Years of Mathematics Study	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Four Years or More	69%	77%	77%	81%	78%
Three Years	27%	20%	21%	17%	20%
Two Years	2%	2%	2%	1%	2%
Less Than Two Years	1%	0%	1%	0%	0%

TABLE 47
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Type of College Sought

Type of College	ACPS (n=367)
4 Year College	89%
2 Year College	7%
Vocational or Technical School	1%
Undecided	3%

TABLE 48
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Degree Level Goal ACPS, Virginia, and Nation

Degree Level Goal	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
Certificate	0%	1%	1%
Associate	0%	1%	1%
Bachelor's	18%	29%	26%
Master's	32%	31%	31%
Doctorate	26%	18%	20%
Other	1%	0%	0%
Undecided	23%	21%	20%

TABLE 49
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students Choosing Various College Majors in ACPS, Virginia, and Nation

Intended Majors	ACPS (n=367)	Virginia (n=59,612)	Nation (n=1,530,128)
Arts or Humanities	17%	14%	13%
Biological Sciences or Related Areas	21%	24%	26%
Business, Commerce, or Communications	19%	17%	18%
Physical Sciences or Related Areas	13%	16%	15%
Social Sciences or Related Areas	21%	21%	21%
General and Interdisciplinary	2%	2%	1%
Technical and Vocational	1%	1%	1%
Undecided	4%	4%	4%

TABLE 50
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Number of Advance Placement or Exemptions They Expect in College

Number of Courses	ACPS (n=367)
0	50%
1	15%
2	15%
3	8%
4	4%
5	6%
6 or more	1%

TABLE 51
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Gender Designation of College Sought

Type of College	ACPS (n=367)
Single Sex	5%
Coeducational	71%
Undecided	24%

TABLE 52
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Type of College Affiliation

College Affiliation	ACPS (n=367)
Public	72%
Private	29%
Religious	1%
Undecided	8%

Total is more than 100 percent because multiple marks

TABLE 53
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Preferred College Setting

College Setting	ACPS (n=367)
City	38%
Suburban/Small Town	35%
Rural	7%
Undecided	22%

TABLE 54
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Preferred College Location

College Location	ACPS (n=367)
Close to Home	19%
Virginia	44%
Nearby State	23%
States Further Away	29%
Outside of the Country	4%
Undecided	18%

Percentages total more than 100% because of multiply marked responses

TABLE 55
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students by Preferred College Housing

College Housing	ACPS (n=367)
At Home	8%
On Campus	73%
Off Campus	2%
Undecided	17%

TABLE 56
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of SAT Test-Takers in ACPS Applying for Financial Aid (2005-2009)

Year	2005 (n=376)	2006 (n=350)	2007 (n=398)	2008 (n=402)	2009 (n=367)
Percent of Test Takers Applying for Financial Aid	74%	72%	75%	74%	77%

TABLE 57
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of Students Planning to Work During College

Part-time Job	ACPS (n=367)
Yes	61%
No	8%
Undecided	31%

TABLE 58
 Alexandria City Public Schools
 2009 SAT Results
 Number and Percentage of SAT Subject Test-Takers for
 ACPS, Virginia, and Nation

SAT Subject Test Takers	ACPS	Virginia	Nation
Number	75	9,184	294,893
Percentage of SAT Test Takers	20%	15%	19%

TABLE 59
 Alexandria City Public Schools
 2009 SAT Results
 Percentage of ACPS SAT Subject Test-Takers
 Broken Out by Number of Tests Taken for ACPS, Virginia, and Nation

Number of Subject Tests	Percent		
	ACPS	Virginia	Nation
1	3%	8%	7%
2	53%	47%	42%
3	32%	38%	40%
4 or more	12%	7%	10%

Table 60
 Alexandria City Public Schools
 2009 SAT Results
 SAT Subject Test Mean Scores for ACPS, Virginia, and Nation

SAT Subject Test	ACPS		Virginia Mean Score	Nation Mean Score
	Number Tested	Mean Score		
Literature	34	630	621	580
United States History	48	636	637	599
World History	4	- ^a	626	589
Mathematics Level I ^b	26	555	605	599
Mathematics Level II ^b	21	692	673	648
Biology - E ^c	7	697	620	598
Biology - M ^c	21	743	657	641
Chemistry	10	551	650	638
Physics	5	630	662	655
French	4	- ^d	615	618
German with Listening	2	- ^d	571	609
Japanese with Listening	1	- ^d	640	689
Latin	2	- ^d	611	618
Spanish	4	- ^d	611	646
Spanish with Listening	1	- ^d	615	652

^a The Mathematics Level I Subject Test: three years of college preparatory mathematics

^b The Mathematics Level II Subject Test: more than three years of college preparatory mathematics

^c The Biology Test contains a common core of 60 general-knowledge questions, followed by 20 questions that emphasize either ecological (Biology - E) or molecular (Biology - M) subject matter.

^d No mean scores are provided when there are less than five test takers.

TABLE 61
 Alexandria City Public Schools
 2009 SAT Results
 Mean SAT Reasoning Scores of Students Who Also Have SAT Subject Test Scores
 Broken Out by SAT Subject Test

SAT II Subject Test	Reading		Math		Writing	
	Mean	SD	Mean	SD	Mean	SD
Literature	649	77	600	90	649	76
United States History	628	78	609	87	640	83
Math Level I	582	80	568	80	591	85
Math Level II	660	--	708	--	646	--
Biology-E	613	--	576	--	580	--
Biology-M	668	--	662	--	682	--
Chemistry	603	--	623	--	612	--
Physics	666	--	706		656	--
Any SAT II	627	--	613	--	631	--

Discussion and Recommendations

Undeniably, there is a gap in the measured SAT performance of various student groups in the ACPS. The gap is not new, nor is it a local phenomenon. Numerous national reports have documented the achievement gap in America and many of these reports have argued passionately about the reasons for such a disparity. In this final section of the report, an ecological assessment of Alexandria' circumstances will be offered and forthright recommendations made.

Summary of Strengths

The SAT results for the 2009 test-takers showed several promising trends and strengths. The first was the overall gain in the reading scores. There has been a two-point gain over a five-year period for reading scores. A second strength for the test-takers was their performance and participation in the SAT subject tests. More (20%) ACPS test-takers completed the one-hour academic-specific test than students in Virginia (15%) and the nation (19%). In addition to exceeding in participation, ACPS subject test-takers also exceeded the state and the nation in performance. ACPS subject test-takers out performed students in Virginia four times and the nation five times across the various tests. The difference between ACPS subject test-takers performance on the Molecular Biology subtest was considerably large, with ACPS scoring more than 100 points above the national average. This year's results also showed an equitably distributed percent of test-takers from each income level. The percent of ACPS test-takers (42%) who had family incomes of \$50,000 or lower was greater than the percent (25%) of state test-takers that were in the same income range (Table 27). An increase in the number of years of study in arts and music was another trend noted in the 2009 SAT results. There was a gain over the last five years for all test-takers' years of study in arts and music. In particular, the years of study for Black test-takers in arts and music increased from 1 year and six months to two years and one month.

The damning denouement for the ACPS resides in the consistent comparison of its lower scoring groups to their direct state and national counterparts. The undramatic outcome: below average performance. While admittedly, this comparison of averages to averages tends to mask the true range (low to high) of students' performance, it still conveys a stark reality.

Summary of Concerns

There is no hiding from:

- Black students score lower than Black students in the state or nation in Reading and Math;
- Hispanic students score lower than Hispanic students in the state in Reading, Math, and Writing, and lower than national Hispanics in Math;
- Asian students score lower than Asian students in the state and nation in Reading, Math, and Writing;
- ELLs, when their first language is other than English, score lower than their state and national counterparts in Reading, Math, and Writing;
- ELLs, who learned English and another language at the same time score lower than their state and national counterparts in Reading and Math;
- ACPS students from families below \$30,000 score lower than their state and national counterparts in Reading and Math;

- ACPS students from families with incomes between \$30,000-\$50,000 score lower than their state and national counterparts in Reading, Math, and Writing;
- ACPS students whose parents have an associate degree or less score lower than their state and national counterparts in Reading, Math, and Writing; and
- ACPS students whose parents have bachelors' degrees score lower than their state and national counterparts in Reading, Math, and Writing;

The foregoing litany is stark, but as noted previously, averages may mask the true meaning of a range of scores. Thus, it is important to demystify and review some of the distributional data presented earlier. Figures 5 to 7 show the distribution of Reading, Math, and Writing scores by ethnicity.

Beyond the raw reality of averages, Figures 5-7 display a more textured sense of student achievement. For example in Figure 5-Reading, it can be seen that approximately 16% of Hispanic test takers score in the 200-299 range. As a point of clarification, 200 is the lowest possible score on the SAT. Roughly speaking, 30% of Black, Hispanic, and Asian students are scoring less than 400 on the Reading and Math tests.

The other end of the spectrum is sparsely populated or uninhabited for these same ethnic groups. No Asians above 700 in Reading or Writing No Hispanics above 700 in Math. In the 600-699 range, each of these three groups has some representation. From a low of 5% of Blacks in Reading to a high of 20% for Asians in Writing, there is a core group of ethnic students who are performing quite well.

Based on a 2005 Educational Testing Services (ETS) policy information report entitled "Characteristics of Minority Students Who Excel on the SAT and in the Classroom", a good deal is known about such students nationally. This report found that on average, Black and Hispanic students took fewer high school courses that were associated with higher SAT scores and had lower high school grades. Both of these findings have been previously corroborated in the ACPS. For example, Table 44, which displays the average years of academic study for the past five years broken out by ethnicity, documents the consistent course-study gap between Blacks, Hispanics, and Whites. Table 8 in Monitoring and Evaluation's Alumni Report released in December 2004 showed the GPA for the 2003 graduating class to be: Black = 2.4 (n=243); Hispanic = 2.6 (n=103); Asian = 3.1 (n=39); and White = 3.3 (n=156). Also shown in Table 9 of that report was the fact that ACPS Black, Hispanic, and Asian GPAs were lower than the GPAs of their national counterparts.

The ETS report noted, "Taking a rigorous course load in high school has been shown to be one of the best indicators of succeeding in college through attainment of a bachelor's degree," it also identified that the "academic superstar" (translates to a 1950 SAT total or above in 2009 with the addition of Writing) were more likely to have at least one parent with a college degree. In the ACPS, there are large numbers of Black, Hispanic, and Asian students without a college-educated parent. Nonetheless, the ACPS strategic plan obligates the division to ensure that all students have the requisite course work and are college-ready.

Recommendations

To address the areas of concern identified throughout this report, the following four recommendations are made:

1. **Enhance SAT Preparatory Programs:** The first recommendation is the enhancement of currently offered SAT preparatory programs. The current

programs should be enhanced to serve more students, by offering programs during the school day and with a limited financial burden on families. As noted in the decrease in scores on the SAT reasoning tests, the 2009 test-takers were less prepared than in previous years. In addition, the average combined SAT score for ACPS continues to be lower than Virginia and the nation. Further, as indicated throughout this report, the preparation gap between ACPS students who traditionally attend college (white, middle income students with college educated parents) and those who traditionally do not (minority, low income students with parents who did not complete college) continues to be a trend in the ACPS. The differences in performance are often related to students' exposure to the SAT content¹. According to the College Board (2008), students who score high on the SAT have three things in common, completed a core curriculum, taken the most rigorous courses and were familiar with the test. Students, who are only exposed to the SAT during the test, may have more anxiety and low levels of belief in their performance. An enhanced SAT preparatory program will increase the percent of SAT test-takers who are exposed to the SAT content¹. To address this area of concern the current SAT preparatory programs offered at T.C. Williams High School should be expanded to provide support to all students prior to their senior year. The program can be offered during the school day to attract students who are least likely to participate after school for different reasons (i.e., athletic practice, working part-time, caring for younger siblings, etc.)¹. Finally, the program should be offered without any costs to the student families with schools providing funding. The school division should minimize cost to operate the program by soliciting volunteers from the local universities and business to serve as SAT coaches.

2. **Focus on Academic Language:** The second recommendation is a clear focus on the academic language embedded in the SAT. Given that there are two types of language (social and academic)² used in schools and the home, students who are from homes that have a language other than English need additional support acquiring the academic language used in SAT. This is an important area of concern for students in the ACPS as, 34% of the division test-takers reported a language background of either another language or another language and English, compared to 16% in Virginia (Table 21). Related to academic language gaps, students who are English Language Learners (ELL) in the ACPS score lower than their state and national counterparts on the SAT. To address this school staff must work to embed academic language into the daily routine of all students. As illustration, a daily SAT word of the day should be expanded to include a host of synonyms and common mistranslations as they relate to the first language of many students at T.C. Williams High school. Additionally, the focus on academic language should benefit those English-speaking students who may employ a non-traditional dialect in their homes.
3. **Inform Students of the College Entrance Requirements:** The third recommendation is direct instruction in what constitutes a college ready student for all students. ACPS should begin informing parents and students of college entrance requirements as early as the 8th grade. Thus, each student who enters high school will be equipped with the knowledge of the years of study in courses needed to gain entry into college. While in high school, all will be

exposed to the skills needed to successfully gain entry into a post-secondary institution.

Unfortunately, this concept is not echoed in national trends. Nationally, about one third of all students who completed high school were not college ready³. Almost half are required to take remedial courses³. Of this number, minority students represent the majority of students who were least prepared academically for post secondary education⁴. This is also an area of concern within the ACPS SAT results, on average, Whites and Asians had the highest average years of study, followed by Hispanics and Blacks. These trends have been consistent over the past five years. Students should be explicitly taught the differences between meeting the requirements for high school graduation and meeting the requirements for college entry by school faculty. As a result of presenting the requirements for college entry in an unambiguous format, students may begin as early as 8th grade deciding the courses to take. The Institute for Education Sciences' What Works Clearinghouse (2009) provides several recommendations that address this concern (Appendices 3 and 4). The What Works Clearinghouse recommends creating individual academic plans for each student that becomes a living document during the course of a high school student. One relevant ACPS program, Advancement Via Individual Determination (AVID) was implemented to increase college bound students' preparedness for college by providing direct instruction in how to get to and through college². AVID is in its first year of implementation at ACPS middle schools and Minnie Howard. For more information on the AVID program and its outcomes see, www.avid.org.

4. **Enhance Outreach Efforts:** The fourth recommendation is the enhancement of SAT outreach efforts used in recruiting students to participate in the SAT test and SAT preparatory programs. Expanding SAT outreach will increase students' chances of gaining admission to post secondary institutions¹, an increasing demand of the 21st century workforce. Unfortunately, as the demands increase for college educated workers, the percentage of the ACPS test-takers continues to decrease. Of the 2009 graduating class only 367 (56%) took the SAT this percentage is down from years' past. To prepare all ACPS graduates for the demands for 21st century skills all graduating seniors should be ready for and take the SAT exam. To encourage more students to participate in the SAT and SAT preparatory programs, staff need to include non traditional ideas in their outreach efforts to share information about the SAT and steps necessary for college enrollment with all students. For example, The Institute for Education Sciences' What Works Clearinghouse (2009) recommends schools set up a SAT information and registration table at an athletic event such as a football game. Students will become registered at this table, provided information on fee waivers, and given information about future academic and career plans. Though a simplistic example, the idea is that numerous and consistent approaches must be employed.

Recommendations included in this section were developed using multiple data sources, including The What Works Clearinghouse practice guide, "Helping Students navigate the path to college: What high schools can do" (Appendixes 3 and 4). The practice guide provides steps and example activities that educators can use beginning in the ninth-grade that increase

student access to post secondary education. The What Works Clearinghouse (WWC) is an initiative of the Institute of Education Sciences (IES). For more information about the WWC recommendations and to view their full report, see <http://ies.ed.gov/ncee/wwc/>.

The ACPS vision is to set the international standard for educational excellence where all students achieve their potential and actively contribute to our local communities. If ACPS is to truly aspire to higher planes, to dramatically improve achievement outcomes for all students, and to prepare students for success in a global community, SAT performance is a meaningful metric for evolution.

APPENDIX 1

Alexandria City Public Schools
 2009 SAT Results
 SAT Reading, Math, and Writing Scores for ACPS and Divisions in the
 Washington, D.C. Metropolitan Area^a

Division	Reading	Math	Writing	Total
Fairfax	552	569	543	1664
Prince William	507	499	493	1499
Loudoun	533	535	525	1593
Arlington	541	548	521	1610
Manassas Park	501	518	488	1507
Falls Church	568	577	567	1712
District of Columbia	405	392	399	1196
Montgomery County	533	547	536	1615
Anne Arundel	504	519	495	1518
Howard	544	561	546	1651
Frederick	514	529	506	1549
Charles	493	490	481	1464
Calvert	514	516	501	1531
St. Mary's	520	530	509	1559
Alexandria	484	474	483	1441
National Average	501	515	493	1509

^a Information collected from multiple sources including: The Washington Post (2009, Aug 26,09. and school division reports.)

APPENDIX 2

CAUTIONS ON THE USE OF AGGREGATE SAT SCORES*

As measures of developed reading and mathematical abilities important for success in college, SAT scores are useful in making decisions about individual students and assessing their academic preparation. Using these scores in aggregate form as a single measure to rank or rate teachers, educational institutions, districts, or states is invalid because it does not include all students. In being incomplete, this use is inherently unfair.

The most significant factor in interpreting SAT scores is the proportion of eligible students taking the exam--the participation rate. In general, the higher the percentage of students taking the test, the lower the average scores. In some states, a very small percentage of college-bound seniors take the SAT. Typically, these students have strong academic backgrounds and are applicants to the nation's most selective colleges and scholarship programs. Therefore, it is to be expected that the SAT reading and mathematical averages reported for these states will be higher than the national average. In states where a greater proportion of students with a wide range of academic backgrounds take the SAT, and where most colleges in the state require the test for admission, the scores are closer to the national average. Thus, to make useful comparisons of students' performance between states, a common test given to all students would be required. Because the percentage of SAT takers varied widely among the states, and because the test takers are self-selected, the SAT is inappropriate for this purpose.

In looking at average SAT scores, the user must understand the context in which the particular test scores were earned. Other factors variously related to performance on the SAT include academic courses studied in high school, family background, and education of parents. These factors and others of less tangible nature could very well be a significant influence on average scores. This is not to say, however, that scores cannot be used properly as one indicator of educational quality. Average scores analyzed from a number of years can reveal trends in the academic preparation of students who take the test and can provide individual states and schools with a means of self-evaluation and self-comparison.

By studying other indicators--such as retention/attrition rates, graduation rates, number of courses taken in academic subjects, or scores on other standardized tests--one can evaluate the general direction in which education in a particular jurisdiction is headed. A careful examination of other conditions impinging on the educational enterprise, such as pupil-teacher ratios, teacher credentials, expenditures per student, and minority enrollment, is also important

Summaries of scores and other information by state, college, or school district can be used in curriculum development, faculty staffing, financial aid assessment, planning for physical facilities, and student services such as guidance and placement. Aggregate data can also be useful to state, regional, and national education policymakers, especially in tracking changes during a period of time.

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Appendix 3

The Institute of Education Sciences What Works Clearinghouse Checklist for carrying out the recommendations

Recommendation 1: Offer courses and curricula that prepare students for college-level work, and ensure that students understand what constitutes a college-ready curriculum by 9th grade

- Implement a curriculum that prepares all students for college and includes opportunities for college-level work for advanced students.
- Ensure that students understand what constitutes a college-ready curriculum.
- Develop a four-year course trajectory with each 9th grader that leads to fulfilling a college-ready curriculum.

Recommendation 2: Utilize assessment measures throughout high school so that students are aware of how prepared they are for college, and assist them in overcoming deficiencies as they are identified

- Identify existing assessments, standards, and data available to provide an estimate of college readiness.
- Utilize performance data to identify and inform students about their academic proficiency and college readiness.
- Create an individualized plan for students who are not on track.

Recommendation 3: Surround students with adults and peers who build and support their college-going aspirations

- Provide mentoring for students by recent high school graduates who enrolled in college or other college-educated adults.
- Facilitate student relationships with peers who plan to attend college through a structured program of extracurricular activities.
- Provide hands-on opportunities for students to explore different careers, and assist them in aligning postsecondary plans with their career aspirations.

Recommendation 4: Engage and assist students in completing critical steps for college entry

- Ensure students prepare for, and take, the appropriate college entrance or admissions exam early.
- Assist students in their college search.
- Coordinate college visits.
- Assist students in completing college applications.

Recommendation 5: Increase families' financial awareness, and help students apply for financial aid

- Organize workshops for parents and students to inform them prior to 12th grade about college affordability, scholarship and aid sources, and financial aid processes.
- Help students and parents complete financial aid forms prior to eligibility deadlines.

Adapted from The What Works Clearinghouse practice guide, "Helping Students navigate the path to college: What high schools can do". The What Works Clearinghouse (WWC) is an initiative of the Institute of Education Sciences (IES). For more information about the WWC recommendations and to view their full report, see <http://ies.ed.gov/ncee/wwc/>.

**Appendix 4
Activities addressing SAT performance and participation***

WWC Recommendations	WWC Example Activities	Current: School Level Activities Addressing Recommendations
Recommendation 1: Offer courses and curricula that prepare students for college-level work, and ensure that students understand what constitutes a college-ready curriculum by 9th grade	Develop individualized education, learning, or graduation plans that guides students extracurricular choices throughout high school that are living documents that are referred to by teachers, and counselors, and provided to parents Develop a general four year trajectory that defines the potential timing and sequence of college ready classes for students	
Recommendation 2: Utilize assessment measures throughout high school so that students are aware of how prepared they are for college, and assist them in overcoming deficiencies as they are identified	Use whole assessments or subset of items from exciting college placement exams as a diagnostic measure Inform student about their performance and implications for accessing college at least annually	
Recommendation 3: Surround students with adults and peers who build and support their college-going aspirations	Recruit college educated professionals to serve as volunteer mentors from local businesses Recruit local college students (particularly graduates of the high school) to mentor	
Recommendation 4: Engage and assist students in completing critical steps for college entry	Infuse extracurricular activities with a college going message, for example a community service club might collaborate with a student organization from a local college Set up an SAT information table at athletic events Use email and phone blasts, that reach all students to share information about key SAT deadlines	
Recommendation 5: Increase families' financial awareness, and help students apply for financial aid	In-person visits to English classes by high school staff knowledgeable about the entrance tests Hold financial aid workshops for students and parents Encourage parents to estimate financial aid eligibility using FAFSA's <i>Forecast Eligibility Tool</i> (www.fafsa4caster.ed.gov) Create worksheets that displays potential costs for college next to potential sources of financial aid to demonstrate college affordability	

*Selected examples for a full list of all activities please see <http://ies.ed.gov/ncee/wwc/>

APPENDIX 5

Notes

¹ Allen, W. R., Bonous-Hammarth, M., & Suh, S.A. (2003). Who goes to college? High school context, academic preparation, the college choice process, and college attendance. In E. P. St. John (Ed.), *Readings on equal education*. (p. 71-113). New York: AMS Press.

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³College Board. (2005). *2005 College-bound seniors: Total group profile report*. Retrieved January 12, 2009 from <http://www.collegeboard.com>.

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