REGIONAL RESOURCE

The Council of State Governments■3355 Lenox Road, N.E., Suite 1050■Atlanta, Georgia 30326■404/266-1271

Acing the Boards: Southern Student Participation and Performance on the SAT I

Jonathan Watts Hull

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Every year, states anxiously await the announcement of their students' performance on the Scholastic Aptitude Test I (SAT), largely because these scores provide a yardstick for measuring progress toward school improvement and for assessing student performance. Alongside state assessments, the SAT often is cited as a benchmark toward the end goal of raising student achievement. But the information provided by SAT scores is more complex than the customary ranking of state composite scores by news organizations and the resulting crowing or hand wringing over high or low results. The SAT, like the other major college entrance exam the ACT, is a self-selecting assessment. Participation is not universal among all students and, indeed, it is generally taken by students who intend to continue to a four-year college. For these reasons, the SAT provides an excellent source of information about how well states compare in preparing students for college-level work in a broad range of contexts. This *Regional Resource* analyzes results from the 2003 SAT I, with particular attention to how students in various subsets perform compared to their peers in other states and to other subgroups within their state.

The SAT, administered by The College Board in Princeton, New Jersey, is a three-hour test measuring verbal and mathematical reasoning skills. Student test scores are used as one indicator by many colleges and universities to determine the readiness of a candidate for enrollment to pursue college-level work. The SAT is scored on a scale of 200-800 for each part (verbal and math), with the two scores added together for a student's total score.

College-bound students east of the Mississippi River historically have taken the SAT, while those west of the Mississippi River have taken the ACT, a similar assessment that was often preferred by colleges in the West. The SAT has increased its profile of student participation over the past two decades, with 80 percent of colleges without open-enrollment policies now accepting SAT scores as part of their application process.

Testing patterns offer interesting comparisons across the Southern states. In nine of the 16 SLC member states, less than 20 percent of all students participate in the SAT. Nationally, 48 percent of the 2.94 million high school graduates in the country took the SAT. Regionally, only 34 percent took the SAT. The impact on low participation rates often is to inflate the scores for the state, since the smaller sample of students often is seeking admission to colleges out-of-state or at more competitive institutions. Table 1 provides SAT participation rates, total participation, and scores for the SLC region.

SAT Participation and Results in the SLC States 2003							
State	Test Takers			Participation Rate	Scores		
	Total	Boys	Girls		Total	Verbal	Math
Virginia	53,965	25,299	28,666	71%	1,024	514	510
Maryland	40,726	18,688	22,038	68%	1,024	509	515
North Carolina	48,893	22,252	26,641	68%	1,001	495	506
Georgia	56,385	25,560	30,825	66%	984	493	491
Florida	83,397	37,772	45,625	61%	996	498	498
South Carolina	22,831	10,295	12,536	59%	989	493	496
Texas	124,779	57,938	66,841	57%	993	493	500
National Average	**1,406,324**	**652,606**	**753,718**	**48%**	**1,026**	**507**	**519**
SLC	**466,662**	**214,575**	**252,087**	**34%**	**1,065**	**534**	**531**
West Virginia	3,673	1,679	1,994	20%	1,032	522	510
Tennessee	8,039	3,755	4,284	14%	1,128	568	560
Kentucky	5,177	2,450	2,727	13%	1,106	554	552
Alabama	4,294	1,964	2,330	10%	1,111	559	552
Louisiana	3,646	1,669	1,977	8%	1,122	563	559
Missouri	4,850	2,429	2,421	8%	1,165	582	583
Oklahoma	3,080	1,455	1,625	8%	1,131	569	562
Arkansas	1,700	778	922	6%	1,118	564	554
Mississippi	1,227	592	635	4%	1,116	565	551

table 1

Source: The College Board, College-Bound Seniors 2003 State Reports

The remarkable jump in participation between West Virginia, with a participation rate of 20 percent, and Texas, with a participation rate of 57, also marks a drop of 39 points in performance. Indeed, what is perhaps most remarkable in Table 1 is the high performance of Virginia, North Carolina and Maryland, which have participation rates of more than two-thirds and composite scores above 1,000.

Table 1 also provides a snapshot of an interesting phenomenon: Girls have consistently posted higher participation rates than boys for several years. The only state where more boys participate in the SAT than girls in the South is Missouri, and that only by a statistically insignificant eight test takers. In the region and nation, girls account for 54 percent of all SAT test takers.

Another important reason why SAT participation rates lag in some parts of the South is the dominance of the ACT as the preferred college admissions test. The ACT is designed to determine high school students' readiness for college-level work. The test includes four core subject areas: English, mathematics, reading and science. Scoring on the ACT is on a 36-point scale for each of the four subject matter tests, with a student's average counting as the composite score. When ACT participation is compared to SAT participation, many of the states with low SAT test-taking rates have higher percentages of ACT test takers. Indeed, Mississippi, with the lowest participation rate for the SAT in the nation, has the highest credible participation rate for the ACT (Colorado and Illinois both report 100 percent participation, which reflects a reporting anomaly). Table 2 provides a comparison of ACT and SAT participation rates, performance, and deviation from national average performance.

ACT and SAT Participation and Performance 2003						
	ACT			SAT		
State	% Of Graduates Tested	Average Composite Score	Deviation From National Average Performance	Participation Rate	Composite Score	Deviation from National Average Performance
Mississippi	88	18.7	89.9%	4%	1,116	108.8%
Louisiana	80	19.6	94.2%	8%	1,122	109.4%
Tennessee	74	20.4	98.1%	14%	1,128	109.9%
Alabama	73	20.1	96.6%	10%	1,111	108.3%
Arkansas	73	20.3	97.6%	6%	1,118	109.0%
Kentucky	73	20.2	97.1%	13%	1,106	107.8%
Missouri	69	21.4	102.9%	8%	1,165	113.5%
Oklahoma	69	20.5	98.6%	8%	1,131	110.2%
West Virginia	63	20.3	97.6%	20%	1,032	100.6%
SLC Average	**52**	**20.0**	**96.2%**	**34%**	**1,065**	**103.8%**
Florida	41	20.5	98.6%	61%	996	97.1%
National Average	**40**	**20.8**	**100.0%**	**48%**	**1,026**	**100.0%**
South Carolina	34	19.2	92.3%	59%	989	96.4%
Texas	33	20.1	96.6%	57%	993	96.8%
Georgia	22	19.8	95.2%	66%	984	95.9%
North Carolina	15	19.9	95.7%	68%	1,001	97.6%
Maryland	12	20.7	99.5%	68%	1,024	99.8%
Virginia	12	20.6	99.0%	71%	1,024	99.8%

table 2

Sources: 2003 ACT National and State Scores, ACT Average Composite Scores by State; The College Board, College-Bound Seniors 2003 State Reports

As Table 2 reinforces, participation rates affect the average composite score for the state, although this tendency is much more pronounced with the SAT than the ACT. In part this reflects the greater range of scores possible on the SAT than on the ACT, but at the extreme end of the spectrum, higher test participation rates do seem to have a depressive effect on scores, particularly in the cases of Mississippi and Louisiana. There does not appear to be a similar rising of scores with lower ACT participation rates in the region, something which is equally true nationally. The state with the lowest ACT participation rate, Delaware, scores exactly at the national average. While in general, states in the region tend toward student preference of the ACT, the SAT tends to be the preferred test in the most populous SLC states.

SAT participation varies considerably by race and ethnicity as well, as demonstrated by Table 3. In some instances, this indicates the varied ethnic diversity of the state, with West Virginia and Arkansas having proportionately larger non-minority populations than in much of the region. It also may indicate lower college-bound rates among minority students. An historical note not provided by Table 3 is the consistent rise in minority participation in the SAT over the past decade, as reported by The College Board. Minority participation in the SAT has risen nationally from 30 percent in 1993, to 36 percent in 2003, an indication of higher levels of college-bound minority students.

SAT Participation by Ethnicity											
State	Total number	White		Black		Hispanic		Asian		Other/No Response	
		number	percent	number	percent	number	percent	number	percent	number	percent
Alabama	4,312	2,576	59.7%	581	13.5%	64	1.5%	194	4.5%	897	20.8%
Arkansas	1,689	1,122	66.4%	140	8.3%	27	1.6%	84	5.0%	316	18.7%
Florida	83,035	36,553	44.0%	9,686	11.7%	11,349	13.7%	2,806	3.4%	22,641	27.3%
Georgia	43,388	27,003	62.2%	12,144	28.0%	1,130	2.6%	1,997	4.6%	1,114	2.6%
Kentucky	5,177	3,639	70.3%	229	4.4%	58	1.1%	179	3.5%	1,072	20.7%
Louisiana	3,646	1,962	53.8%	522	14.3%	92	2.5%	188	5.2%	882	24.2%
Maryland	40,726	17,826	43.8%	8,455	20.8%	1,127	2.8%	2,254	5.5%	11,064	27.2%
Mississippi	1,227	667	54.4%	209	17.0%	20	1.6%	60	4.9%	271	22.1%
Missouri	4,850	3,047	62.8%	283	5.8%	98	2.0%	240	4.9%	1,182	24.4%
North Carolina	48,893	27,528	56.3%	8,986	18.4%	863	1.8%	1,229	2.5%	10,287	21.0%
Oklahoma	3,042	1,871	61.5%	161	5.3%	52	1.7%	168	5.5%	790	26.0%
South Carolina	22,831	12,778	56.0%	4,953	21.7%	272	1.2%	422	1.8%	4,406	19.3%
Tennessee	8,039	5,423	67.5%	605	7.5%	104	1.3%	326	4.1%	1,581	19.7%
Texas	124,571	52,059	41.8%	12,562	10.1%	24,558	19.7%	5,759	4.6%	29,633	23.8%
Virginia	50,965	26,580	52.2%	4,829	9.5%	1,576	3.1%	2,839	5.6%	15,141	29.7%
West Virginia	3,673	2,759	75.1%	112	3.0%	39	1.1%	82	2.2%	681	18.5%
SLC Total/Average	1,416,324	223,393	49.3%	64,457	13.8%	41,429	8.9%	18,827	4.0%	114955	24.6%

Source: The College Board, College-Bound Seniors 2003 State Reports

Participation rates among minorities generally lag student enrollment figures for most states. While nearly 15 percent of students in the South are Hispanic, just less than 9 percent take the SAT. While more than 25 percent of all students in the region are black, just fewer than 14 percent take the SAT. Asian students, which comprise only 2 percent of Southern school enrollment, account for 4 percent of test takers, the only minority group over-represented in participation. Of note, white participation lags behind enrollment as well. The high degree of "opting out" on this component of the questionnaire (25 percent regionally) makes it difficult to assess actual minority participation. Table 4 provides enrollment data for the 2002 school year, the most recent year for which data is available. It is worth noting that in states with higher degrees of participation in the SAT among all students (the seven SLC states above the national average), minority participation often is also higher than in states where fewer students proportionately take the SAT.

Student Enrollment K-12 by Ethnicity 2002 School Year											
State	Total Students	White		Black		Hispanic		Asian		Other	
		Number	%	Number	%	Number	%	Number	%	Number	%
Alabama	737,294	438,509	59.5%	264,506	35.9%	11,108	1.5%	5,869	0.8%	5,357	0.7%
Arkansas	449,805	319,723	71.1%	104,951	23.3%	18,672	4.2%	4,159	0.9%	2,300	0.5%
Florida	2,500,478	1,312,667	52.5%	621,569	24.9%	511,247	20.4%	48,079	1.9%	6,916	0.3%
Georgia	1,470,634	791,255	53.8%	561,354	38.2%	80,776	5.5%	34,812	2.4%	2,437	0.2%
Kentucky	654,363	545,629	83.4%	63,808	9.8%	6,920	1.1%	4,287	0.7%	1,312	0.2%
Louisiana	731,328	356,344	48.7%	349,550	47.8%	11,358	1.6%	9,311	1.3%	4,765	0.7%
Maryland	860,640	451,388	52.4%	320,489	37.2%	46,251	5.4%	39,401	4.6%	3,111	0.4%
Mississippi	493,507	233,236	47.3%	251,728	51.0%	4,208	0.9%	3,566	0.7%	769	0.2%
Missouri	909,792	718,348	79.0%	159,059	17.5%	18,337	2.0%	11,100	1.2%	2,948	0.3%
North Carolina	1,315,363	789,633	60.0%	412,192	31.3%	68,957	5.2%	25,245	1.9%	19,336	1.5%
Oklahoma	622,139	396,581	63.7%	67,334	10.8%	40,373	6.5%	9,051	1.5%	108,800	17.5%
South Carolina	691,078	376,699	54.5%	286,819	41.5%	16,187	2.3%	6,879	1.0%	1,674	0.2%
Tennessee	925,030	653,137	70.6%	225,717	24.4%	18,940	2.0%	10,575	1.1%	1,487	0.2%
Texas	4,163,447	1,701,179	40.9%	598,223	14.4%	1,735,040	41.7%	116,229	2.8%	12,776	0.3%
Virginia	1,163,091	730,681	62.8%	315,105	27.1%	63,950	5.5%	50,094	4.3%	3,261	0.3%
West Virginia	282,885	267,462	94.5%	12,386	4.4%	1,173	0.4%	1,567	0.6%	297	0.1%
SLC Average/Total	17,970,874	10,082,471	56.1%	4,614,790	25.7%	2,653,497	14.8%	380,224	2.1%	177,546	1.0%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data, 2001-2002 School Year

What is more discouraging is the overall performance of minorities on the SAT. In general, Asian students and those recording their ethnicity as other categories, or not responding, score close to or above the state average. Hispanic performance generally is below the state average by a significant amount, but the size of the population, and the variations within the category (the SAT distinguishes between Hispanics of Latin American, Mexican, and Puerto Rican origin) makes the disparities difficult to summarize. Black students, however, perform well below state average, in some cases by several hundred points. Table 5 provides a summary of student performance by ethnicity.

It is not surprising that wide variations in performance also are present among students with different levels of family income. Interestingly, however, except at the very lowest and highest ends of the income scale, participation in the SAT is relatively even. Students with family incomes under $10,000 and over $100,000 are unevenly represented, but within each income band, participation clusters around 10 percent for each division. Performance, however, consistently rises across income, with test performance rising consistently as income rises. Table 6 illustrates this.

Performance by Ethnicity

State	State average score	White		Black		Hispanic		Asian		Other/No Response	
		percent	score	percent	score	percent	score	percent	score	percent	score
Alabama	1,111	60.0%	1,151	13.5%	905	1.5%	1021	4.5%	1,191	20.9%	1,136
Arkansas	1,118	66.0%	1,139	8.2%	932	1.6%	981	4.9%	1,144	18.6%	1,155
Florida	996	43.8%	1,041	11.6%	847	13.6%	938	3.4%	1,049	27.1%	980
Georgia	984	47.9%	1,035	21.5%	852	2.0%	941	3.5%	1,030	25.0%	987
Kentucky	1,106	70.3%	1,113	4.4%	948	1.1%	1030	3.5%	1,150	20.7%	1,073
Louisiana	1,122	53.8%	1,142	14.3%	924	2.5%	1099	5.2%	1,173	24.2%	1,090
Maryland	1,024	43.8%	1,089	20.8%	855	2.8%	978	5.5%	1,099	27.2%	1,016
Mississippi	1,116	54.4%	1,168	17.0%	914	1.6%	996	4.9%	1,157	22.1%	1,139
Missouri	1,165	62.8%	1,182	5.8%	967	2.0%	1094	4.9%	1,185	24.4%	1,196
North Carolina	1,001	56.3%	1,050	18.4%	839	1.8%	958	2.5%	1,052	21.0%	978
Oklahoma	1,131	60.7%	1,144	5.2%	963	1.7%	1080	5.5%	1,148	25.6%	1,137
South Carolina	989	56.0%	1,039	21.7%	847	1.2%	961	1.8%	1,046	19.3%	987
Tennessee	1,128	67.5%	1,146	7.5%	951	1.3%	1093	4.1%	1,134	19.7%	1,113
Texas	993	41.7%	1,054	10.1%	841	19.7%	902	4.6%	1,074	23.7%	1,000
Virginia	1,024	49.3%	1,064	8.9%	854	2.9%	983	5.3%	1,064	28.1%	1,018
West Virginia	1,032	75.1%	1,031	3.0%	840	1.1%	955	2.2%	1,119	18.5%	986
SLC Average/Total	1,065	47.9%	1,099	13.8%	892	8.9%	1001	4.0%	1,113	24.6%	1,062
National Average/Total	1,026	47.3%	1,047	8.9%	857	7.6%	912	7.1%	1,083	28.4%	1,004

Source: The College Board, College-Bound Seniors 2003 State Reports

SAT Participation and Performance by Family Income

	All Groups	>$10,000		$10,000-$20,000		$20,000-$30,000		$30,000-$40,000		$40,000-$50,000		$50,000-$60,000		$60,000-$70,000		$70,000-$80,000		$80,000-$100,000		More than $100,000	
	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score
Alabama	1,111	3.7%	836	5.9%	917	6.7%	987	7.3%	1,042	7.1%	1,056	7.7%	1,083	7.7%	1,127	8.9%	1,122	14.5%	1,147	30.5%	1,171
Arkansas	1,118	4.3%	994	5.2%	989	8.5%	1,028	10.0%	1,050	9.7%	1,091	10.5%	1,133	9.6%	1,090	10.8%	1,125	12.2%	1,168	19.2%	1,171
Florida	996	4.6%	841	10.2%	882	12.2%	917	12.7%	954	9.9%	978	9.4%	994	7.9%	1,004	7.4%	1,016	9.7%	1,032	16.0%	1,088
Georgia	984	4.8%	811	9.2%	855	10.6%	889	12.1%	928	9.5%	953	9.3%	976	8.5%	984	8.2%	1,020	10.9%	1,026	16.8%	1,085
Kentucky	1,106	1.3%	926	3.1%	996	5.5%	1,010	8.4%	1,061	8.5%	1,078	9.5%	1,084	9.9%	1,097	9.3%	1,107	16.5%	1,116	28.0%	1,133
Louisiana	1,122	3.2%	894	7.1%	935	7.4%	990	10.7%	1,066	7.5%	1,104	8.2%	1,091	7.7%	1,128	8.5%	1,128	14.0%	1,148	25.6%	1,195
Maryland	1,024	3.2%	803	6.1%	843	7.9%	894	10.4%	930	8.7%	967	9.0%	998	8.3%	1,001	8.8%	1,041	13.5%	792	24.2%	1,121
Mississippi	1,116	4.0%	811	7.5%	884	8.0%	954	9.5%	1,012	8.5%	1,097	6.9%	1,126	7.7%	1,136	8.9%	1,157	13.6%	1,144	25.3%	1,170
Missouri	1,165	1.2%	1,007	0.3%	985	15.2%	1,099	7.6%	1,114	6.2%	1,125	7.5%	1,142	6.9%	1,130	8.1%	1,157	13.9%	1,175	33.2%	1,202
North Carolina	1,001	4.2%	814	9.0%	663	11.3%	906	12.6%	943	10.5%	954	10.2%	995	9.0%	1,012	8.5%	1,026	10.2%	1,056	14.6%	1,107
Oklahoma	1,131	2.2%	1,069	4.3%	1,031	8.0%	1,051	9.3%	1,062	9.1%	1,114	9.3%	1,127	9.9%	1,121	9.6%	1,133	14.5%	1,141	23.9%	1,170
South Carolina	989	5.0%	821	10.1%	868	11.4%	911	12.6%	948	10.6%	975	10.7%	997	8.8%	1,005	8.3%	1,023	10.2%	1,044	12.3%	1,086
Tennessee	1,128	1.7%	973	4.1%	996	5.9%	1,031	8.3%	1,075	8.2%	1,094	8.9%	1,110	8.1%	1,119	9.3%	1,214	14.2%	1,134	31.3%	1,168
Texas	993	6.0%	808	10.8%	857	11.7%	892	12.1%	930	9.0%	965	8.8%	984	7.5%	999	7.3%	1,023	10.3%	1,040	16.5%	1,097
Virginia	1,024	3.2%	827	6.5%	868	8.7%	909	10.9%	946	9.4%	970	9.6%	996	8.9%	1,003	8.7%	1,030	12.7%	1,058	21.5%	1,121
West Virginia	1,032	2.5%	870	5.6%	970	7.9%	983	11.9%	978	11.8%	990	12.9%	1,003	11.1%	1,030	9.8%	1,025	10.8%	1,039	15.7%	1,103
SLC Average	1,065	4.5%	882	8.8%	909	10.6%	966	11.7%	1,002	9.4%	1,032	9.3%	1,052	8.2%	1,062	8.1%	1,084	11.1%	1,079	18.1%	1,137
National Average	1,026	4.7%	864	8.4%	889	9.7%	927	11.2%	964	9.3%	993	9.5%	1,012	8.4%	1,025	8.2%	1,041	11.4%	1,065	19.1%	1,123

table 6

Source: The College Board, College-Bound Seniors 2003 State Reports

In addition to the overall trend toward higher performance as family income rises, Table 6 also illustrates the disproportionate number of test takers in the uppermost income bands. While the distribution generally is even between incomes over $20,000 and below $80,000, the top two brackets account for nearly 30 percent of all test takers nationally and regionally. In some states, particularly those with lower overall participation rates, the uppermost income bands account for more than 40 percent of all test takers. What also is clear from Table 6 is the degree to which higher incomes correlate to surpassing the sate average SAT score. In only two states in the region (Mississippi and South Carolina) do students in households earning less than $60,000 post average scores above the state average. In two (West Virginia and Missouri), only students in households with income above $80,000 achieve average scores above the state average. Nationally and regionally, students in households earning above $70,000 post average scores on the SAT that exceed the respective national or regional average. An important caveat with this information is the degree of test takers who do not respond to this question on the survey of participants. Because students may not be the best source of information about their parent's income, drawing hard and fast conclusions from this data is difficult, but the general trend reinforces what other data on student performance indicates.

Beyond ethnicity and socio-economic status, where students live affects both their participation and their scores on the SAT. The great majority of SAT test takers attend schools in large city and suburban districts, with nearly half of all SAT participants in the region in these areas. Rural areas lag the farthest behind, with just over 10 percent of all SAT test takers, with small towns accounting for an additional 16 percent. This combined total of just over one-quarter of all SAT test takers represents significantly fewer than the estimated 40 percent of students who live in these areas. North Carolina is significant in running contrary to the regional trend. Nearly half (47 percent) of SAT participants live in either small towns or rural areas in the state, with large cities and the suburbs accounting for only one-fifth. Only West Virginia surpasses this performance, although with considerably fewer participants as a whole. It is perhaps more intriguing that Missouri, with a considerable rural population, has less than 2 percent of its SAT participants living in rural areas, and slightly more then 13 percent of participants from small towns and rural areas combined. Table 7 illustrates this information.

SAT Participation by Locale

State	Total	Large City		Medium-sized City		Small City or Town		Suburban		Rural		Unknown	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Alabama	4,294	382	8.9%	1,157	26.9%	1,002	23.3%	1,022	23.8%	252	5.9%	479	11.2%
Arkansas	1,700	151	8.9%	576	33.9%	552	32.5%	93	5.5%	183	10.8%	145	8.5%
Florida	83,397	24752	29.7%	14669	17.6%	10862	13.0%	18400	22.1%	2590	3.1%	12124	14.5%
Georgia	56,385	8725	15.5%	5675	10.1%	12106	21.5%	17578	31.2%	6177	11.0%	6124	10.9%
Kentucky	5,177	1468	28.4%	1159	22.4%	779	15.0%	1027	19.8%	376	7.3%	368	7.1%
Louisiana	3,646	1677	46.0%	634	17.4%	401	11.0%	531	14.6%	142	3.9%	261	7.2%
Maryland	40,726	8325	20.4%	2293	5.6%	3831	9.4%	19761	48.5%	3523	8.7%	2993	7.3%
Mississippi	1,227	189	15.4%	226	18.4%	453	36.9%	132	10.8%	132	10.8%	95	7.7%
Missouri	4,850	1859	38.3%	200	4.1%	565	11.6%	1789	36.9%	88	1.8%	349	7.2%
North Carolina	48,893	4282	8.8%	9843	20.1%	11014	22.5%	6152	12.6%	12082	24.7%	5520	11.3%
Oklahoma	3,080	1160	37.7%	724	23.5%	439	14.3%	427	13.9%	91	3.0%	239	7.8%
South Carolina	22,831	1319	5.8%	2828	12.4%	7850	34.4%	4904	21.5%	3164	13.9%	2766	12.1%
Tennessee	8,039	2448	30.5%	1631	20.3%	1293	16.1%	1634	20.3%	483	6.0%	550	6.8%
Texas	124,471	36428	29.3%	12418	10.0%	18710	15.0%	33761	27.1%	8176	6.6%	14978	12.0%
Virginia	53,065	7620	14.4%	5317	10.0%	5643	10.6%	20720	39.0%	8691	16.4%	5074	9.6%
West Virginia	3,673	0	0.0%	712	19.4%	1416	38.6%	247	6.7%	989	26.9%	309	8.4%
SLC Total/ Average	**465,454**	**100,785**	**21.7%**	**60,062**	**12.9%**	**76,916**	**16.5%**	**128,178**	**27.5%**	**47,139**	**10.1%**	**52,374**	**11.3%**

table 7

Source: The College Board, College-Bound Seniors 2003 State Reports

Where students live seems to affect their performance on the SAT. While lower rates of participation in general inflate the relative scores, the lower participation rates in proportion to the students in rural areas do not lead to higher scores. Indeed, rural areas in general lag behind all areas in their performance on SAT results. It bears noting that outside factors such as family income and parents with college education both correlate to higher performance on the SAT, which provides some clues as to the lower performance for students in rural places and small towns. Table 8 illustrates the composite performance of students on the SAT by locale.

Virginia (50 and 91) have very significant performance spreads.

While in some instances this rural gap may be attributable on a state level to sample size distortion, the trend is consistent across the region and the country, with rural students scoring 47 points below the median score regionally and 28 points lower nationally. The apparent 20 point discrepancy between the performance "gaps" at the regional and national levels is likely more a factor of the inflationary effect of having so many lower participation rate states in the region. The regional average score of 1,065 is nearly 40 points higher than the national average score. So even though

Student Composite (Verbal + Math) Performance on the SAT by Locale

	All Locales	Large City		Medium-sized City		Small City or Town		Suburban		Rural	
	Score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score	% of test takers	score
Alabama	1,111	8.9%	1,119	26.9%	1,144	23.3%	1,050	23.8%	1,166	5.9%	1,013
Arkansas	1,118	8.9%	1,159	33.9%	1,156	32.5%	1,109	5.5%	1,090	10.8%	1,053
Florida	996	29.7%	985	17.6%	1,019	13.0%	1,009	22.1%	1,014	3.1%	978
Georgia	984	15.5%	999	10.1%	977	21.5%	961	31.2%	1,032	11.0%	939
Kentucky	1,106	28.4%	1,058	22.4%	1,122	15.0%	1,117	19.8%	1,098	7.3%	1,076
Louisiana	1,122	46.0%	1,134	17.4%	1,140	11.0%	1,144	14.6%	1,124	3.9%	1,082
Maryland	1,024	20.4%	975	5.6%	1,056	9.4%	1,029	48.5%	1,060	8.7%	1,017
Mississippi	1,116	15.4%	1,203	18.4%	1,161	36.9%	1,107	10.8%	1,190	10.8%	915
Missouri	1,165	38.3%	1,189	4.1%	1,164	11.6%	1,121	36.9%	1,163	1.8%	1,135
North Carolina	1,001	8.8%	1,037	20.1%	1,034	22.5%	998	12.6%	1,025	24.7%	969
Oklahoma	1,131	37.7%	1,146	23.5%	1,139	14.3%	1,117	13.9%	1,136	3.0%	1,123
South Carolina	989	5.8%	1,053	12.4%	1,020	34.4%	992	21.5%	1,013	13.9%	948
Tennessee	1,128	30.5%	1,127	20.3%	1,125	16.1%	1,150	20.3%	1,151	6.0%	1,100
Texas	993	29.3%	976	10.0%	994	15.0%	984	27.1%	1,037	6.6%	962
Virginia	1,024	14.4%	1,035	10.0%	978	10.6%	1,019	39.0%	1,065	16.4%	974
West Virginia	1,032	0.0%	0	19.4%	1,072	38.6%	1,041	6.7%	1,053	26.9%	1,002
SLC Average	1,065	21.7%	1,012	12.9%	1,081	16.5%	1,059	27.5%	1,089	10.1%	1,018
National Average	1,026	23	1,000	12	1,026	18	1,019	35	1,066	11	998

Source: The College Board, College-Bound Seniors 2003 State Reports.

In only three states, Maryland, Missouri, and Oklahoma, do rural areas not perform the poorest among locales. The divergence from the state average score can be significant, as well, with rural SAT participants in Mississippi scoring more than 200 points lower than the state average, and more than 288 points below large city students, the top scoring locale. While other states have rural performance gaps of lesser degrees, some states, including Alabama (98 points off average, 153 off high locale), Arkansas (65 and 106), Georgia (45 and 93), South Carolina (41 and 105), and

rural students in the South score higher than the national average for rural SAT participants, the even higher regional average score for all locales affects the overall divergence of rural performance. It is significant that the discrepancy between the average scores for the highest performing locales (suburban) at both the regional and national level exceed those for rural areas by almost the same amount (71 points regionally and 68 points nationally). This is interesting particularly because the regional average score for the highest performing locale is still 23 points

above the national average. Indeed, in no location category does the South perform worse than the national average. It should be noted that the sample sizes in Alabama, Arkansas, Mississippi, and West Virginia are so small that there is some potential for distortion, although there is no reason to suspect that the distortion would be exclusively contrary to performance.

Another factor having an impact on student performance on the SAT is the level of education of the student's parents. There is a general correlation between parental educational attainment and student performance. In most states, students whose parents have less than a bachelor's degree perform below the state average. In a few states, students with parents with associates degrees surpass the state average score. Table 9 illustrates this.

Table 9 also points out the relatively high number of SAT participants whose parents did not go to college. Regionally and nationally, roughly one-third of all SAT test takers had parents with only a high school diploma. Within the region this rate varies widely from a low of 13.6 percent in Missouri to a high of almost 39 percent in Georgia. The high percentage of SAT participants whose parents had a high school diploma in Texas, Florida, Georgia, North Carolina, and Virginia correlates with the five most populous Southern states, with less populous states having lower rates of SAT participants with parents with only a high school diploma. An important consideration with this Table as with the income Table is that a number of students did not respond to this question on the background survey. Thus, while there is some clear correlation between parental education and performance, the average scores do not provide any conclusive evidence of the degree to which parents' educational attainment influences students' performance on the SAT.

School size would seem to have only limited impact on SAT performance overall. The test asks students to identify the size of their senior class, which in most places would be a number accounting for roughly one-quarter of the high school's enrollment. Performance within states at times reveals interesting trends, but no cross-cutting conclusion can be drawn from this information. In most instances, the very largest schools seem to do poorly compared to others within their states, but the South and indeed, the nation does not abound in schools in the 3,000+ students size. The smallest schools, those with senior classes of fewer than 100 students, often

SAT Participation and Performance by Parents' Educational Attainment

	Total Group	No High School Diploma		High School Diploma		Associates Degree		Bachelor's Degree		Graduate Degree	
	Score	% of test takers	Score	% of test takers	Score	% of test takers	Score	% of test takers	Score	% of test takers	Score
Alabama	1,024	1.5%	903	19.0%	979	5.3%	1,015	33.6%	1,122	40.7%	1,178
Arkansas	1,024	1.0%	873	15.4%	1,033	41.4%	1,077	19.8%	1,123	22.4%	1,184
Florida	1,001	4.2%	851	34.0%	935	10.7%	970	27.9%	1,025	23.1%	1,074
Georgia	984	3.3%	845	38.6%	912	9.0%	945	27.5%	1,020	21.7%	1,074
Kentucky	996	0.6%	926	21.8%	1,035	6.9%	1,071	32.6%	1,107	38.1%	1,148
Louisiana	989	1.1%	941	21.9%	1,004	4.4%	1,021	32.6%	1,136	40.0%	1,189
Maryland	993	2.6%	819	32.8%	923	7.8%	965	27.4%	1,072	29.4%	1,134
Mississippi	1,032	1.8%	799	15.9%	988	7.1%	980	32.8%	1,095	42.4%	1,191
Missouri	1,128	0.7%	915	13.6%	1,055	4.9%	1,055	33.2%	1,154	47.6%	1,221
North Carolina	1,106	2.0%	849	35.7%	924	12.3%	956	29.7%	1,033	20.3%	1,113
Oklahoma	1,111	1.0%	944	20.9%	1,046	5.4%	1,080	33.8%	1,134	38.9%	1,179
South Carolina	1,122	2.5%	847	37.9%	920	12.3%	951	27.6%	1,027	19.7%	1,089
Tennessee	1,165	0.8%	930	18.9%	1,043	4.9%	1,059	36.1%	1,130	39.3%	1,177
Texas	1,131	8.0%	828	35.9%	917	7.7%	952	28.0%	1,043	20.5%	1,097
Virginia	1,118	2.6%	844	32.2%	929	8.6%	957	29.0%	1,046	27.6%	1,126
West Virginia	1,116	0.9%	945	33.2%	956	9.3%	967	28.8%	1,051	27.8%	1,101
SLC Average	1,065	4.2%	879	34.0%	975	9.3%	1,001	28.5%	1,082	24.0%	1,142
National Average	1,026	4.8%	856	32.8%	945	8.8%	978	28.0%	1,059	25.5%	1,128

Source: The College Board, College-Bound Seniors 2003 State Reports.

score higher than state averages but, again, inconsistencies among states make even this a less than crystalline set of data. Because smaller schools often have been shown to have salubrious effects on student learning, the inconclusiveness of the impact of attending the smallest schools in this comparison is perhaps frustrating to a casual observer. A probable factor in diffusing the anticipated benefits of smaller school size is the proportion of smaller schools located in rural areas where, as has been noted, higher poverty and lower parental educational attainment likely serve to suppress student achievement. Indeed, it is likely that small schools can be said to perform quite well when their comparative socio-economic disadvantages are weighed in. Table 10 offers a comparison of participation and performance on the SAT by the size of the test taker's senior class.

Unlike the NAEP, which tests a representative sample of students in all participating states, the SAT is a self-selected test, with a sample drawn not from the general population, but from those students likely to continue to a four-year college and, in many states in the region, those students likely to continue their post-secondary education at selective institutions. This one fact, more than any other, makes comparisons based on the SAT problematic. Georgia, which ranks at the bottom of SAT scores but near the top based on participation, compares poorly with Mississippi which only tests a handful of students who score well above the national average based on scores alone. But Georgia's scores are nearly two points (on a 36 point scale) above Mississippi's on the ACT, an assessment in which the participation rates are, to a degree, reversed.

SAT Performance by Size of Senior Class

State	Avg. Score	>1,000		750-1,000		500-749		250-499		100-249		<100	
		%	Score	%	Score	%	Score	%	Score	%	Score	%	Score
Alabama	1,024					7	1,137	34	1,141	28	1,078	32	1,116
Arkansas	1,024					14	1,150	30	1,135	35	1,159	24	1,027
Florida	1,001	1	983	4	952	21	994	51	997	14	1,046	9	1,019
Georgia	984			0	782	14	1,069	40	987	32	957	13	1,006
Kentucky	996							46	1,121	39	1,094	15	1,111
Louisiana	989						897	33	1,154	38	1,126	28	1,121
Maryland	993			1	1,071	6	997	57	1,031	25	1,017	11	1,099
Mississippi	1,032							23	1,134	45	1,154	33	1,066
Missouri	1,128					4	1,183	45	1,174	30	1,170	20	1,145
North Carolina	1,106					3	1,074	42	1,029	45	971	10	1,040
Oklahoma	1,111	4	1,114	3	1,151	9	1,153	37	1,143	22	1,093	25	1,166
South Carolina	1,122					4	1,042	38	1,014	40	983	18	997
Tennessee	1,165					4	1,142	41	1,132	30	1,137	25	1,132
Texas	1,131			7	1,063	22	1,029	42	973	17	986	12	1,006
Virginia	1,118					12	1,058	51	1,038	25	988	12	1,038
West Virginia	1,116							45	1,035	42	1,026	13	1,077

table 10

Source: The College Board, College-Bound Seniors 2003 State Reports

The SAT, along with the National Assessment of Educational Progress (NAEP) serves as a yardstick for states to mark their student's performance against a national benchmark. Often, however, state policymakers and the public consider only a glimpse of the information the SAT can offer on student performance, and fail to consider the limitations the assessment has for measuring student achievement. As the SAT becomes more widely used, student participation will continue to rise, which makes its data more applicable for comparisons across states.

States can use the data found within their SAT results, and trends found within the region and country on how different groups participate in and perform on the SAT, to guide education policies for all students. As the economy continues to demand workers with four-year degrees, preparation for college-level work—the skills the SAT is intended to measure—likely will become the standard for high school achievement. Using the results of disaggregated data from the SAT provides a window on what area states are adequately providing for certain students and areas in

which others need additional assistance to move ahead.

In summary, the SAT is only one measure of a student's accomplishments, obviously, and caution should be taken to not read too much into SAT (or other similar) results. Student performance across a spectrum of measures, from state assessments, grade point average and class rank, graduation rates, national norm-referenced tests, and matriculation to and completion of college, all point to the sufficiency of the educational delivery. The advantage SAT results can offer policymakers is the information they provide about how diverse groups are performing on a key benchmark test for college admissions. Comparisons across groups and over time provide windows on how well particular students are being served as well as what the educational expectations are of these students. The rise in participation, particularly among minorities, is an encouraging sign, as is the high number of students participating in the test whose parents only possess a high school diploma. The poor performance of low-income, minority students, and rural students raises concerns, however.

This ***Regional Resource*** was prepared for the Education Committee of the Southern Legislative Conference (SLC) by Jonathan Watts Hull, SLC Regional Representative.

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southern legislative conference • p.o. box 98129 • atlanta, georgia 30359 • ph: 404/633-1866 • fx: 404/633-4896 • *www.slcatlanta.org*