


Office of the Superintendent of Schools  
MONTGOMERY COUNTY PUBLIC SCHOOLS  
Rockville, Maryland

December 6, 2011

MEMORANDUM

To: Members of the Board of Education

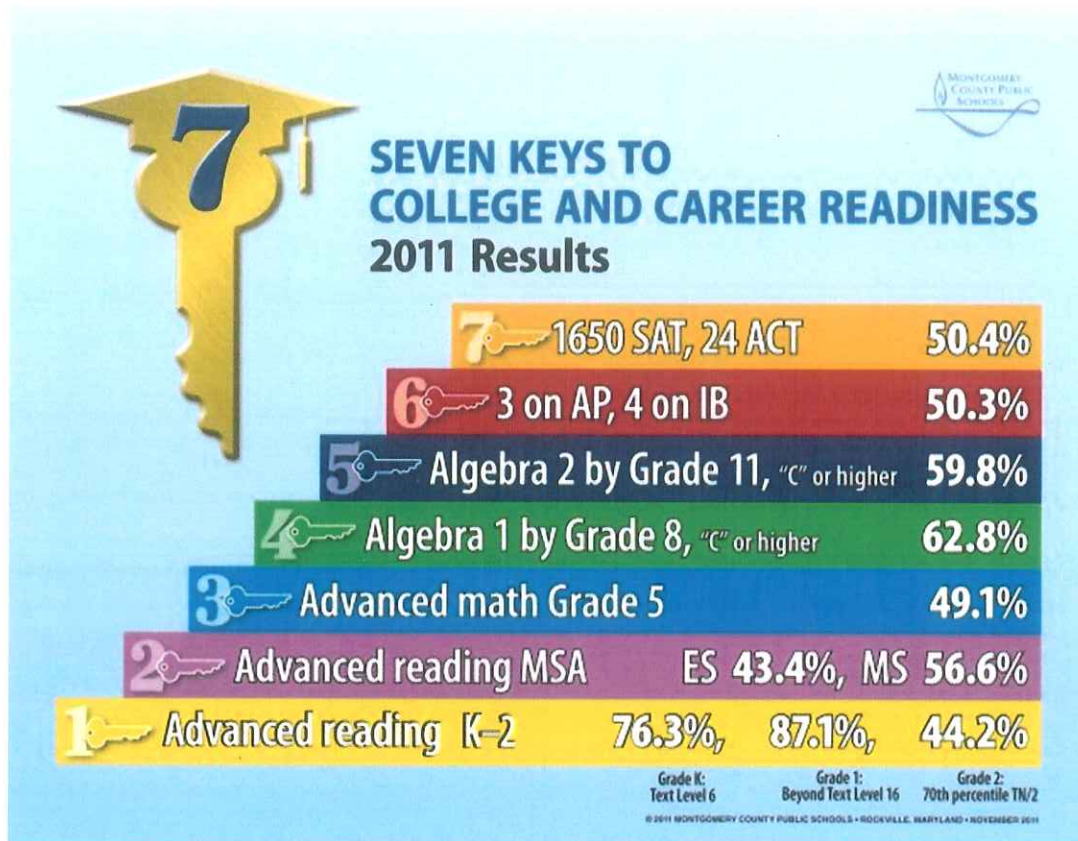
From: Joshua P. Starr, Superintendent of Schools 

Subject: Update on Seven Keys to College and Career Readiness 2011 Data Points

**Background**

Each year the Montgomery County Board of Education reviews the school district's progress on important data points. These data points span all five goals of *Our Call to Action: Pursuit of Excellence*, the strategic plan for Montgomery County Public Schools (MCPS) and provide a panoramic view of system progress. Of all the data points, seven instructional data points have been identified as having heightened importance for student success. The Seven Keys to College and Career Readiness (Seven Keys), launched by MCPS in 2008, is a pathway that identifies benchmarks for evaluating if students are on the trajectory for college and career readiness. The Seven Keys begin with Key 1, advanced reading in kindergarten and end with Key 7, 1650 SAT, 24 ACT, at the high school level. MCPS developed the Seven Keys based on Office of Shared Accountability research, which identified key data points in a student's school career that are reliable predictors of whether a student will be fully ready for college-level work. The Seven Keys also are predicated upon an abundance of national research that consistently indicates that the rigor of a student's high school curriculum is one of the prime factors in predicting whether a college freshman will go on to complete a bachelor's degree.

In order to ensure that every student is college and career ready, MCPS did not rely on the Maryland state high school graduation requirements. The Seven Keys are more demanding than the Maryland State high school graduation requirements—which may not be sufficient to prepare students to take and do well in college-level classes or prepare them for success in the workplace, where higher-level skills are necessary. The Seven Keys are embedded in the strategic plan, which identifies the key performance targets that raise expectations and standards in an effort to realize the goal that student and school performance will not be predictable by race/ethnicity, language proficiency, disability or socioeconomic status. The performance targets reflect the requirements of national, state, and local accountability mandates for high school graduation. Although all of the performance targets are rigorous, performance standards that place students on track for high school graduation are not rigorous enough to place students on a trajectory for success in college or competitiveness in a global workforce.



### The Literacy Keys

*Key 1: Advanced reading in Grades K–2.* This first key is intended to ensure that students obtain a strong foundation in literacy in the early years. In the early grades, students read and comprehend levels of text that are of increasing difficulty. To be academically ready for college or a career, MCPS students are expected to read and understand passages at the advanced level on the MCPS primary reading assessments from kindergarten to Grade 2. In kindergarten, students who can read Level 6 text by the end of the year are reading at advanced levels. By the end of Grade 1, students should be reading Level 16 books. In Grade 2, students who score in the 70th percentile or higher on a national test, the *TerraNova Second Edition* (TN/2) are reading at advanced levels. Scoring at the 70th percentile means that they perform better than 70 percent of students nationwide. Our 2011 data show that 76 percent of kindergarten students are reading at Text Level 6, and 44 percent of MCPS Grade 2 students scored at or above the 70th percentile on the TN/2. Although we continue to make consistent progress with our kindergarten students reaching Text Level 6, our success rate with the percentage of students reaching the 70th percentile on TN/2 remains relatively flat. This is an area that continues to require monitoring as well as to initiate discussions about practices that will enhance teaching and learning to address the advanced reading needs of our Grade 2 students.

*Key 2: Advanced reading on MSA in Grades 3–8.* This key identifies where students need to be in upper elementary school and middle school. Maryland School Assessment (MSA) results are

scored as “basic,” “proficient,” or “advanced.” Students who score “advanced” demonstrate more complex reading, thinking, writing, and creative problem-solving skills. In Grades 3–8, MCPS students are expected to score at the advanced level on the MSA in reading. MCPS students scoring advanced in MSA reading for each grade level are shown in Table 1.

Table 1  
A Comparison of 2004, 2010, and 2011 Student Performance  
on MSA Reading Percentage Scoring Advanced, by Grade

	2004	2010	2011
Grade 3	17.5	28.0	26.4
Grade 4	22.9	38.4	38.2
Grade 5	39.6	62.6	66.0
Grade 6	44.6	55.2	54.3
Grade 7	38.4	57.6	58.4
Grade 8	31.4	57.4	57.2

*Note.* Results were reported by the Maryland State Department of Education.

### The Math Keys

*Key 3: Advanced math in Grade 5.* Students can be accelerated in math as early as kindergarten. In Grade 5, students are provided the opportunity to experience advanced level mathematics work. This key monitors proficiency at the advanced level. For Grade 5 students participating in higher level mathematics courses, successful performance means meeting one of two possible criteria. For the majority of students, success was determined by meeting or exceeding the established proficiency level on the Math Unit Assessment for the course in which they were enrolled: Mathematics 6, Mathematics 7, or Algebra Prep. For a limited number of Grade 5 students enrolled in Investigations into Mathematics (IM) or Algebra 1 or enrolled outside of their elementary school and not participating in MCPS unit assessments, success was determined by passing the course with a final letter grade of “D” or higher. There has been ongoing discussion related to mathematics, mathematics instruction, and mathematics acceleration. This constructive and inclusive discussion may have implications for this key. The current discussion is focused on exactly what our students need as they leave elementary school and move to middle school.

*Key 4: Algebra 1 by Grade 8 with a “C” or higher.* Research has indicated that Algebra 1 provides an important gateway to academic success. Students who complete Algebra 1 with a “C” or higher by the end of Grade 8 are more likely to be successful in science and higher level mathematics courses in high school, as well as on entrance exams for college. Since 2001, MCPS has seen a steady increase in the percentage of Grade 8 students achieving Key 4, from 41 percent in 2001 to 63 percent in 2011. The Seven Keys originally looked at students earning a “C” or higher, while the district target in the Annual Report was based on a student earning a “D” or higher. A grade of “C” represents an acceptable level of performance whereas a grade of “D” represents a minimal level of performance. In order to align all reporting with the rigorous Seven Keys, it was necessary to change our system’s business rules to review the Algebra 1 data through the lens of students earning a “C” or higher in all data reported.

*Key 5: Algebra 2 by Grade 11 with a “C” or higher.* Research indicates that students who complete Algebra 2 by the end of Grade 11, with a “C” or higher, will perform better on the SAT and ACT college entrance exams and are less likely to have to take remedial mathematics courses in college. Students who complete Algebra 2 also are more than twice as likely to graduate from college than are students with less mathematical preparation. Prior to establishing Algebra 2 as a critical key on the pathway to college and career readiness, student achievement remained relatively flat at slightly more than 50 percent of students completing Algebra 2 by Grade 11 with a “C” or higher. Subsequent to this heightened focus, including the initiation of an M-Stat team to examine the Key 5 data, almost 60 percent of students attained Key 5 in 2011. Performance for all racial/ethnic subgroups, in addition to all services groups except English for Speakers of Other Languages students, improved and the successful completion data increased in 2011.

### **The High School Keys**

*Key 6: Score of 3 on an AP exam or 4 on an IB exam.* Advanced Placement (AP) courses are offered in all MCPS high schools and International Baccalaureate (IB) courses are available in eight MCPS high schools; both are college-level courses. It is important for students to take the AP and IB exams that are offered at the end of these courses. Students who take the exams perform better in college than those who do not. Students who score a 3 or higher (on a scale of 1–5) on an AP exam or a 4 or higher (on a scale of 1–7) on an IB exam may earn advanced standing in college or college credit. Each college sets its own criteria for awarding credit. Many students take AP and IB exams across their high school years. The data indicate the percentages of graduates who took at least one AP and/or IB exam at any time during high school. The method MCPS uses for calculating AP/IB exam performance changed in 2011 to include among “graduates” all students graduating throughout the period beginning July of the previous year and ending in June, not just those students graduating in June, as reported in previous years. Of graduates in the MCPS Class of 2011, 50.3 percent earned a score of 3 or higher on at least one AP exam or 4 or higher on at least one IB exam, which is a slight increase from 50.1 percent in 2010.

*Key 7: Score of 1650 on the SAT or 24 on the ACT.* Scoring at least 1650 on the SAT (maximum score 2400) or 24 on the ACT (maximum score 36) college entrance exams helps students gain acceptance to the colleges of their choice. It minimizes the chance that students will have to take remedial courses in college, and it also increases their chances of earning a college degree. In preparation for the SAT, MCPS offers all Grade 10 students the opportunity to take the PSAT (preliminary SAT) free of charge. While the SAT has historically been the test most commonly taken by MCPS high school students in preparation for applying to college, increasing numbers of MCPS high school students have taken the ACT over the past several years in addition to, or in lieu of, the SAT.

In 2011, the method MCPS used for calculating the performance rate changed from methods used in previous years in three ways: the calculation included ACT (not just the SAT); it considered the highest score in one test administration (not the score from the most recent test administration); and it only included those test takers graduating during the 2010–2011 school year (as opposed to

all test takers during the school year). Using the new calculation method, the SAT/ACT performance rate decreased from 51.9 percent in 2010 to 50.4 percent in 2011.

### **Conclusion**

As we look at improving student success, we have focused our monitoring of the keys through our M-Stat process. Currently, we have an M-Stat team directly linked to each of the Seven Keys. These cross-functional teams carefully and systematically gather and analyze data, determine practices that may be taken to scale, and address teaching and learning processes that will improve student results. The work of the SAT M-Stat team is an example of how a team can impact the system's responsiveness when the data indicate the need for action. Through the work of the SAT M-Stat team, a new SAT/ACT Monitoring Tool was created, which allowed school staff members to monitor students' SAT scores more carefully. Specific training was provided to high school staff regarding use of the tools. An SAT summit was held, through the efforts of a cross-functional team, to share best practices used at schools, provide a common understanding of what schools need to do to affect change positively, and reestablish system expectations. The M-Stat teams galvanize our resources and create a focused approach to system issues.

Today's presentation of the Seven Keys to College and Career Readiness will include highlights of Seven Keys data.

Present at the table for today's discussion is Mr. Adrian B. Talley, associate superintendent, Office of Shared Accountability. Dr. Vasuki Rethinam, supervisor of applied research, Office of Shared Accountability, is present in the audience.

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