

How Do Massachusetts' Education Standards and Assessments Stack Up?

What Achieve's Benchmarking Study Means for the Massachusetts Comprehensive Assessment System (MCAS) and the State's New Graduation Requirements

It is no secret that MCAS has been the subject of much controversy in Massachusetts, as policymakers, parents and educators struggle to understand what it will take to help all students reach high levels of achievement. Nonetheless, Achieve's review of Massachusetts' standards and assessments shows the state is working from a strong foundation: Its school improvement efforts are among the best designed in the country.

To respond to the most compelling and thoughtful concerns about education reform in Massachusetts, Achieve has prepared this briefing paper to explain the implications of its findings and to compare Massachusetts' work with school improvement efforts in other states.

1. Are the standards too high for students and schools?

Achieve's review shows that Massachusetts' standards contain most of the important skills and knowledge students across the world are learning today. Thus, while the English language arts and mathematics standards are rigorous — and certainly reflect expectations that are higher than what many students have been expected to achieve in the past — they are by no means “too high.”

The English language arts standards are truly “world class;” they represent high, but achievable goals. Achieve's consultants already use them as exemplars against which to compare the standards of other states. Similarly, the mathematics standards are clear, precise and well organized — one of Achieve's experts went so far as to say they are among the best mathematics standards in the country. However, the math standards do not always emphasize conceptual understanding to the extent that they should, nor are they as rigorous as the best standards from around the world.

If students are to meet these higher standards, it is clear that schools and districts will need to improve professional development opportunities, provide effective instructional tools, implement best practices and more regularly measure student progress.

2. Do the tests measure the content knowledge and skills described in the standards? In other words, is everything found in the tests also found in the standards? Would teachers who have used the standards to guide classroom instruction be surprised by material on the tests?

In English, the match between the standards and the test questions is strong; all test questions are either clearly or partially aligned to MCAS standards. In mathematics, Achieve's experts found that about 90 percent of test questions are aligned to the standards. Creating strong alignment between standards and assessments is difficult, technical, but important work. In both subject areas, Massachusetts' tests are among the best aligned in the country.

3. Are the 10th-grade MCAS assessments too rigorous?

Achieve concluded that the 10th-grade MCAS exams for mathematics and English language arts, while among the more challenging high school tests that we have examined, are still absolutely appropriate for 10th-graders. The knowledge and skills that the standards set out — and that the tests measure — represent the skills and knowledge most high school sophomores should be learning. For example, Achieve’s mathematics reviewers often felt that the test questions were pitched at the easier end of the knowledge and skills described by the standards, and more than 30 percent of the test questions actually are designed to measure 8th-grade standards.

In fact, Achieve’s analysis of student scores and student answers to the tests’ open-ended questions show that most students who do not achieve the “220” or “needs improvement” level that is required to pass the tests have not mastered basic mathematics and English skills. This means that, in mathematics, because 13 items are pegged to 8th-grade standards, a student who can correctly answer the single short-answer item, all of the 11 multiple-choice items and get some points on the 1 open-response question will receive 13–16 points on the assessment. Only 21 points were required in 2000 for a student to meet minimum standards on the MCAS mathematics assessment.

In short, the problem is not the tests — especially if Massachusetts policymakers aim to eliminate the achievement gap by explicitly encouraging schools to raise standards and expect all students to meet them. Rather, in Achieve’s view, individual failures on the tests are likely caused by imperfect curriculum alignment at the school and district level, inadequate preparation and professional development of teachers, low academic expectations for students of color or from disadvantaged backgrounds, and too much tracking of students into watered-down curriculum.

4. Is the test unfair to disadvantaged students? Should all students be held responsible for learning the state standards and the particular content tested by MCAS? Or is the MCAS for the “college-bound” student only?

The demands of the “knowledge economy” in Massachusetts and throughout the country make it imperative to raise standards for all students; more workers than ever before will need advanced mathematics, language, science and critical thinking skills. And according to the Education Trust, nearly 80 percent of students will enroll in college immediately after completing high school. These two factors underlie one of Achieve’s fundamental beliefs: that all children — regardless of family circumstance — can learn at substantially higher levels than they have been expected to in the past. Perhaps most important, schools throughout Massachusetts are already beginning to prove that standards-based teaching and learning will also show results through increased student learning.

Results from Achieve’s benchmarking study indicate that the English and mathematics standards and assessments for *grade 10* focus on, for the most part, essential academic knowledge and skills that should be within the grasp of almost all *graduating seniors*. All students should read Shakespeare in high school, and all students should know how to solve real-world math problems. In fact, merely passing the 10th-grade MCAS tests at or around the “220” level does not ensure that students have enough proficiency to succeed in freshman-level college courses in

mathematics or English. Instead, this score signifies a basic or minimal command of academic content.

Achieve found that one of the salient features of the MCAS tests is that they not only set a higher floor for more students than ever before, but they also raise the ceiling for students. Students who score at the “proficient” level or above on MCAS (currently a score of 240 or higher) demonstrate strong command of mathematics and English language arts skills. Massachusetts has begun a program to award college scholarships to those students who score at the “advanced” level, and, in fact, Achieve encourages higher education and business leaders in Massachusetts to consider using high MCAS scores as one factor in entrance and placement decisions.

Undoubtedly, some students will need more time and extra support to reach even the minimum standards. But, given proper time support, and attention, virtually all students should be able to read, write and do mathematics at the “needs improvement” level on MCAS by the time they finish high school. Some students will need more time to take algebra and geometry courses, for example, and will probably pass the MCAS during their junior or senior year. Other students will need intensive support in writing, as it is clear from analyzing student papers that those students who are not currently passing the MCAS writing test are very minimally competent. The \$80 million targeted investments made over the last two years by the state for extra support programs for students are needed in the short term, before longer-term changes in teaching quality and curriculum development, for example, take effect.

Thus, based on our review of expectations for student learning in other states and around the world, Achieve believes MCAS measures the minimum skills and knowledge that all students, including disadvantaged students, will need to learn to be successful.

(Achieve’s benchmarking studies seek to address two fundamental issues: how the state standards compare to the best in the world and the extent to which a state’s assessment program is aligned to the content and rigor of the standards. Thus, as part of Massachusetts’ study, Achieve did not conduct a bias review, nor did we review accommodations for students whose first language is not English. Rather, most states conduct their own reviews in these two areas.)

5. Does MCAS “dumb down” the curriculum? Does MCAS narrow the curriculum?

Some in Massachusetts have complained that the state mathematics standards may lead to “drill-and-kill” curricula, and that all standardized testing inevitably forces classrooms into “test-prep factories.” In Achieve’s analysis, the mathematics standards make too few connections among interrelated skills, ideas and concepts. Achieve’s reviewers were concerned that students would not gain sufficient understanding of important mathematical concepts. Yet, fortunately, Achieve’s assessment reviewers found that the 10th-grade 2001 MCAS math test sends the right signals to parents and educators about what’s important for students to be learning. The math MCAS test emphasizes conceptual understanding and making connections across content strands. Students are consistently asked to apply their knowledge, to think critically and to reason their way through problems.

Similarly, in English, a majority of the reading test questions ask students to make inferences and analyze the reading passages. All of the open-ended reading questions challenge students to interpret what they have learned and draw conclusions. And the writing test is quite challenging and focused on academic content that is typically taught in Massachusetts' classrooms. In other words, the tests require students to demonstrate high-level skills and deep understanding that no amount of mere "test prep" will solve.

That said, Achieve's reviewers were concerned that the English language arts tests to date are somewhat unbalanced in favor of fiction at the expense of informational text. In Achieve's view, all students — regardless of their paths after high school — should have a rich and rigorous literature-based curriculum that includes a wide variety of literary traditions, time periods and authors. At the same time, all students should learn how to comprehend, interpret and evaluate nonfiction texts, such as informational articles, journal articles from other academic disciplines, historical documents and speeches, editorials, and instructional manuals.

The MCAS English test reviewed by Achieve's consultants is heavily weighted toward the interpretation of literary elements and concepts; such a weighting is understandable given that the English language arts standards adopted in 1997, on which this test was based, also weighted the study of fiction. The standards were revised in 2000 (becoming stronger, in Achieve's view) and are now more even handed in their treatment of fiction and nonfiction. In developing the 2002 tests, Massachusetts should ensure that the tests emphasize the understanding and evaluation of both literary texts and nonfiction materials.

6. Do schools spend too much time preparing for MCAS?

Because of the types of skills and knowledge measured by MCAS, Achieve believes the most effective preparation for MCAS occurs when teachers, local curriculum developers and administrators use the state standards to implement aligned local curriculum and instruction. Standards, not assessments, should guide teaching and learning, and Achieve encourages educators to work with their peers to weed out bad educational practices based solely on test preparation. Such strategies will yield only short-term gains in test scores at best, not long-term increases in student learning, which is the state's overarching goal.

Because the state has taken the mystery out of MCAS by promptly releasing all common items to the public, and because the MCAS tests reviewed by Achieve are closely aligned to the standards, educators should also be able to examine closely what the standards expect and what the tests measure, compare that to their own practice, and gain additional understanding into their students' strengths and weaknesses. Such careful analysis of assessment data is not merely "test preparation," but rather responsible use of achievement information to guide curriculum and instruction.

This view tracks with the best available national data on how teachers are changing their practice in response to assessments. According to a national survey of teachers commissioned by *Education Week*, only about two in 10 teachers report using commercial test-prep materials, altering lessons to fit what's on state tests or using practice tests provided by their state "a great

deal.” By comparison, nearly four in 10 have modified their lessons based on standards or have used individual students’ test results to diagnose learning problems.

Moreover, the Consortium on Chicago School research recently reported findings from the largest study of instructional practices in disadvantaged urban schools. The research showed that students in classrooms using challenging instruction, featuring deep, interactive learning, outperformed students in drill-and-memorization classrooms by 20 percent or more. Real teaching leads to higher test scores — and Achieve believes that MCAS will encourage this sort of real teaching.

7. Are MCAS results provided in a timely and useful manner, and in ways that educators and families can use to improve learning?

Significantly, the state is a national leader in communicating the content of its standards and assessments to teachers and also to students, parents and the general public. Not only does the state announce which standards will be measured which year, but Massachusetts also releases all test items used to determine student, school and district scores on an annual basis. Releasing these items helps ensure public credibility and provides specific models for teachers to use as they design and develop instructional activities. In addition, the detailed feedback provided by MCAS reports helps assure that the test can be used to diagnose individual students’ strengths and weaknesses and to plan curriculum and instruction.

The state also has been successful in reducing the turn-around time required to get some results back to the schools. In June 2001, results from all multiple-choice items were released to educators so that they could make curriculum and student course-placement decisions; in 2000, these results weren’t available until the fall. Without question, it does take several months for the open-ended math, reading and writing tests to be scored and returned to schools and districts. However, the delay in sending these results to educators and parents is a necessary trade-off; the state has rightly chosen to use a sophisticated test that takes time for teachers to score and results to be compiled.