

# The Vermont Legislative Research Service



## Massachusetts Comprehensive Assessment System: An Overview

This report analyzes the way in which the implementation of the Massachusetts Comprehensive Assessment System (MCAS) examination has affected students in the Massachusetts's public school system.

### **MCAS Summary**

The Massachusetts Comprehensive Assessment System was first implemented in 1998<sup>1</sup> in correlation with the standard guidelines put in place by the Massachusetts Educational Reform Act of 1993 and then later the guidelines set forth by the No Child Left Behind Act (NCLB) of 2001.<sup>2</sup> Although originally implemented in 1998 as a trial, the class of 2003 was the first class to have their high school degree withheld based on their 2001 tenth grade MCAS scores.<sup>3</sup> In accordance with the Educational Reform Law, the MCAS is used to "test all public school students in Massachusetts, including students with disabilities and English Language Learner students; measure performance based on the Massachusetts Curriculum Framework learning standards; [and] report on the performance of individual students, schools, and districts."<sup>4</sup> Under the NCLB, schools use the MCAS to gauge progress in the direction of the NCLB's set objective. Originally that objective was for all students to score proficient or higher in both mathematics and English Language Arts (ELA) sections of the MCAS by the 2013-14 academic

<sup>&</sup>lt;sup>1</sup> Massachusetts Department of Elementary and Secondary Education, "National Assessment of Educational Progress: MCAS & NAEP comparison," 2012, accessed March 26, 2013, <a href="http://www.doe.mass.edu/mcas/naep/compare.html">http://www.doe.mass.edu/mcas/naep/compare.html</a>.

<sup>&</sup>lt;sup>2</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview," 2013, accessed March 20, 2013, <a href="http://www.doe.mass.edu/mcas/overview.html?faq=all">http://www.doe.mass.edu/mcas/overview.html?faq=all</a>.

<sup>&</sup>lt;sup>3</sup> Massachusetts Department of Elementary and Secondary Education, "2002 MCAS Technical Report," 2002, accessed March 20, 2013, <a href="http://www.doe.mass.edu/mcas/tech/02techrpt.pdf">http://www.doe.mass.edu/mcas/tech/02techrpt.pdf</a>.

<sup>&</sup>lt;sup>4</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

year. <sup>5</sup> All students in grades three, eight, and ten are required to take the MCAS. <sup>6</sup> "In February 2012, Massachusetts received a waiver of certain aspects of the federal No Child Left Behind law" <sup>7</sup> altering the original goals of the No Child Left Behind law to more realistic ones. <sup>8</sup>

The MCAS test consists of three general subjects: "English Language Arts, Mathematics, [and] Science and Technology/Engineering [STE]." According to the Massachusetts Department of Elementary and Secondary Education, the exam is comprised of a series of questions including: multiple-choice, short answer, open response, and writing prompts. 10

The scoring of the MCAS ranges from 200-280. <sup>11</sup> The numbers correspond with different categories based on four levels. A score between 200 and 218 is considered to be a "failing/warning," a score between 220 and 238 is considered "needs improvement," a score between 240 and 258 equals "proficient," and any score higher falls into the advanced category. <sup>12</sup>

Since 2003,<sup>13</sup> Massachusetts has mandated that students in tenth grade and above achieve a score of proficient or higher in the ELA and mathematics sections in order to be eligible for graduation.<sup>14</sup> It is also necessary for students to receive at least a "needs improvement" score on one of the following: "STE tests: biology, chemistry, introductory physics, or technology and engineering." <sup>15</sup> In the event that a student scores under the required proficient but receives a "needs improvement" grade, they are offered an alternative of fulfilling an Educational

<sup>&</sup>lt;sup>5</sup> Massachusetts Department of Elementary and Secondary Education, "General Information About Massachusetts' NCLB Flexibility Request: Understanding Massachusetts' New Accountability Measures: A Measure for District and School Staff," 2013, accessed March 25, 2013, <a href="http://www.doe.mass.edu/apa/accountability/LEAbrochure.txt">http://www.doe.mass.edu/apa/accountability/LEAbrochure.txt</a>. <sup>6</sup> Massachusetts Department of Elementary and Secondary Education, "National Assessment of Educational Progress: MCAS & NAEP comparison."

<sup>&</sup>lt;sup>7</sup> Massachusetts Department of Elementary and Secondary Education, "Understanding Massachusetts' New Accountability Measures," November 2012, accessed April 6, 2013, <a href="http://www.doe.mass.edu/apa/accountability/LEAbrochure.pdf">http://www.doe.mass.edu/apa/accountability/LEAbrochure.pdf</a>.

<sup>&</sup>lt;sup>8</sup> Massachusetts Department of Elementary and Secondary Education, "Understanding Massachusetts' New Accountability Measures."

<sup>&</sup>lt;sup>9</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

<sup>&</sup>lt;sup>10</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

<sup>&</sup>lt;sup>11</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

<sup>&</sup>lt;sup>12</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

<sup>&</sup>lt;sup>13</sup> Massachusetts Department of Elementary and Secondary Education, "National Assessment of Educational Progress: MCAS & NAEP Comparison."

<sup>&</sup>lt;sup>14</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: Overview."

<sup>&</sup>lt;sup>15</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: High School Graduation Requirements, Scholarships, and Academic Support Opportunities," 2013, accessed March 20, 2013, http://www.doe.mass.edu/mcas/graduation.html.

Proficiency Plan (EPP) in order to acquire the eligibility to graduate. <sup>16</sup> No restrictions have been set on the number of times the tenth grade MCAS may be retaken. <sup>17</sup> Although students must pass the 10<sup>th</sup> grade MCAS exam in order to adhere to graduation requirements, "students have the right to participate in MCAS tests and retests…even after leaving high school." <sup>18</sup>

### **MCAS Effects on Students**

The MCAS is not designed to increase student knowledge inherently, rather it is a tool used to gauge student progress. "The MCAS program is used to hold schools and districts accountable, on a yearly basis, for the progress they have made toward the objective of the No Child Left Behind Act that all students be proficient in Reading and Mathematics by 2014." The MCAS is also the method used to measure student and school progression in terms of Massachusetts' new accountability measures. In February of 2012, the objective was altered to a more realistic goal of "reducing proficiency gaps by half by the end of the 2016-17 academic year." 20

Although the MCAS is applied as an instrument to track progress, performance, and aptitude, there is some indication that implementation of the MCAS has led to certain adverse consequences. A 2006 Massachusetts Department of Education survey in found that 13% of public school districts cited "MCAS concerns" as a main reason that students drop out, further indicating that MCAS caused an increase in dropouts.<sup>21</sup>

As Figure 1 shows, the percent of students graduating from public high schools in Massachusetts reached the lowest point in 2003, the year corresponding to the first graduating class of MCAS takers faced with not receiving a high school diploma without satisfying the MCAS requirements. During 2003, Massachusetts public schools showed a decrease in graduates, while Vermont and the national average showed an increase and no change in graduation levels, respectively.<sup>22</sup>

<sup>&</sup>lt;sup>16</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: High School Graduation Requirements, Scholarships, and Academic Support Opportunities." <sup>17</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: High School Graduation Requirements, Scholarships, and Academic Support Opportunities." <sup>18</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment: High School Graduation Requirements, Scholarships, and Academic Support Opportunities." <sup>19</sup> Massachusetts Department of Elementary and Secondary Education, "Massachusetts Comprehensive Assessment System: Overview," March 2013, accessed April 6, 2013, <a href="http://www.doe.mass.edu/mcas/overview.html">http://www.doe.mass.edu/mcas/overview.html</a>.

<sup>&</sup>lt;sup>20</sup> Massachusetts Department of Elementary and Secondary Education, "General Information About Massachusetts' NCLB Flexibility Request: Understanding Massachusetts' New Accountability Measures: A Measure for District and School Staff," 2013, accessed March 25, 2013.

<sup>&</sup>lt;sup>21</sup> Massachusetts Department of Elementary and Secondary Education, "Survey Finds Most Students Drop Out Over Family Problems and Academics," April 2006.

The National Center for Higher Education Management Systems, "Preparation for College: Public High School Graduation Rates," 2013.

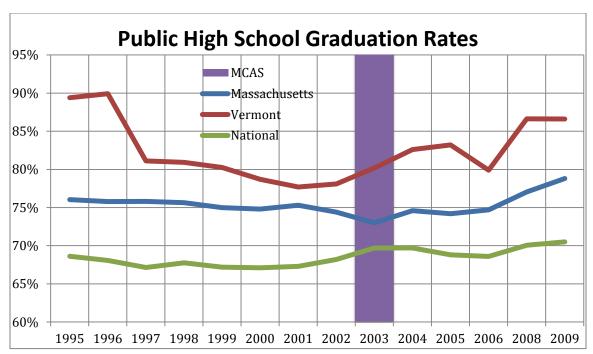


Figure 1. Public High School Graduation Rates.

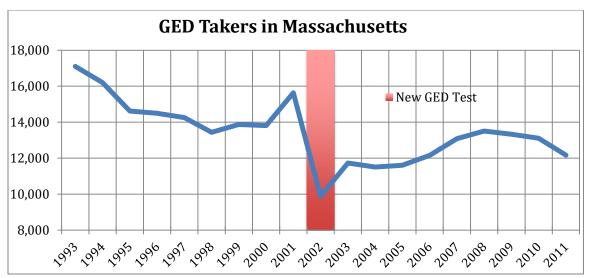
Source: Constructed for this report with data from The National Center for Higher Education Management Systems, "Preparation for College Public High School Graduation Rates." <sup>23</sup>

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As indicated in Figure 2, in 2002 a more difficult version of the GED test was introduced, leading to a nationwide spike in GED test-takers in 2001, presumably hoping to earn their GED before the test became more difficult. The harder test, which featured less multiple choice questions than previous tests, as well as a calculator section, lead to the aforementioned jump in takers for the 2001 GED test, and a 43% decline in the number of 2002 GED takers from the number of takers in 2001. <sup>24</sup> Up until this point, in Massachusetts, there was a general downward trend in GED takers beginning in the early 1990's.

 $^{23}$  The data set did not include figures for the 2007 graduation rate for any state.

<sup>&</sup>lt;sup>24</sup> GED Testing Service, "Who Passed the GED Test? 2002 Statistical Report," July 2004, accessed April 6<sup>th</sup>, 2013, <a href="http://www.gedtestingservice.com/uploads/files/9132bf361efcae8bdfae809eee5cfdfc.3MB">http://www.gedtestingservice.com/uploads/files/9132bf361efcae8bdfae809eee5cfdfc.3MB</a>).

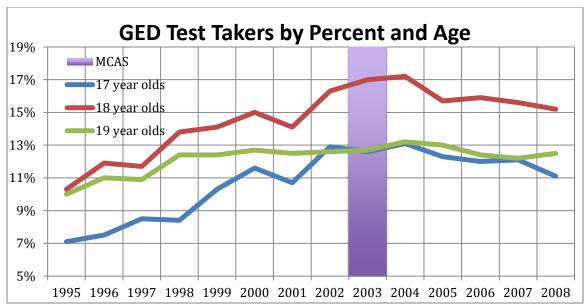


**Figure 2.** GED Test-takers in Massachusetts. Source: GED Testing Service, "Annual Statistical Reports." <sup>25</sup>

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Figure 3 breaks down the demographics of Massachusetts GED test-takers by percent of takers in the age groups of 17, 18, and 19 year olds. The data show that in 2004 (the year after the first graduating class of students would need satisfactory MCAS scores to receive a diploma), 17, 18, and 19-year-old GED test-takers each reached their highest percentage of GED test-takers since at least 1995 and up until 2004. Thus, when one compares Figures 2 and 3, it becomes apparent that although the total number of GED test-takers in Massachusetts did not reach greater levels than the period before 2002-2003, the number of high school aged persons taking the GED test increased during the time period afterwards.

<sup>&</sup>lt;sup>25</sup> The GED Testing Service used a specific methodology to gather ages of test-takers which compiled the 16 year olds with all the test takers under the age of 16; thus 16 year olds could not be a part of the data set as the exact break down between those who were 16 and those under 16 was unavailable. The methodology used was also altered in 2009, where individual ages were changed to age groups. Whereas in previous reports the percent of 17 and 18 year olds were reported individually, the new method grouped 16-18 year olds as one collective percent, effectively limiting our ability to compare individual ages of GED takers after 2008. Also, before 1990, the GED Testing Service used a similar methodology to the post-2008 reports in gathering data of the age of GED test-takers. The pre-1990 reports group 18-19 in a single category, and all GED takers under the age of 17 into a single, separate category as well; again making comparisons before 1990 impossible. GED Testing Service, "Annual Statistical Reports."



**Figure 3.** Percent of GED Test-takers in Massachusetts, 17-19 age groups. Source: Source: GED Testing Service, "Annual Statistical Reports."

# **MCAS Effects on College Preparedness**

Although the passing rate of students taking the MCAS has risen tremendously, there is little evidence that this has had an effect on college performance. "In 1998, when students first started taking the test, fewer than half the students passed both English and math on the first try. Now, 95 percent eventually pass, some after repeated testing. But lack of appreciable improvement in skills among incoming freshman at state colleges raises a deeper question: How well are Massachusetts high schools truly preparing students?" Multiple studies and surveys have echoed the sentiment that many Massachusetts public school graduates (who are MCAS certified by definition) are lacking in basic skills and require placement into remedial classes. "Many of the students arrive on campus with little experience writing papers or with poor study habits. Some 75 percent of those at Bunker Hill Community College and 70 percent at Roxbury Community College need to take two to five remedial classes before they can start courses counting towards a diploma."

<sup>&</sup>lt;sup>26</sup> Maria Sachetti, "Colleges Question MCAS success: Many in state schools still need remedial help," *Boston Globe*, June 2005, accessed April 6<sup>th</sup>, 2013,

http://www.boston.com/news/education/k 12/mcas/articles/2005/06/26/colleges question mcas success/.

Mary Carmichael, "Colleges taking on city's other dropout rate: Many graduate Boston schools unprepared," Boston.com, August 2011, accessed April 6, 2013,

http://www.boston.com/news/education/k\_12/articles/2011/08/28/massachusetts\_colleges\_fight\_to\_keep\_bost on public school graduates enrolled/.

A 2005 study by David Hartleb, then President of Northern Essex Community College, elaborated on the stagnation of student progress. "In 2001, before the MCAS graduation requirement took effect, 87 percent of new high school graduates entering Northern Essex were placed in remedial math, 85 percent in 2002...in 2004, 86 percent of the entering class placed into developmental math – a portion similar to pre-MCAS years." 28

However, a 2010 study by Northeastern University showed that the graduating class of 2003 of Boston public schools had a seven percent increase in college completion than the years before them. However, the class of 2003 had a lower high school graduation rate than the class before them, signaling that many of the weaker students may have not received diplomas. Thus, the college completion rate could have potentially risen due to the fact that the makeup of college students matriculating from Massachusetts public schools may have been overall stronger academically than a class where everyone received diplomas. Furthermore, the group of researchers who conducted the study predicted "that college-completion rates will naturally go up as a greater percentage of Boston graduates score in the exam's top two scoring categories."

### MCAS and the Income Gap

In the US, there is a large, persistent gap in academic achievement between low-income students and their peers. This gap is believed to be increasing the most between students whose families are in the wealthiest 10% and the poorest 10%. This gap "is roughly 30% to 40% larger amongst students born in 2001 than among those born 25 years earlier." <sup>32</sup>

Students from low-income families are also substantially behind when it comes to overall academic achievement. Multiple factors relating to a family's low-income status are believed to aggravate this problem. Students receiving welfare deal with behavioral problems much more

Reshma Trencil, "MCAS hasn't erased the need for remedial classes in community colleges: For MCAS passers, demand for remedial courses remains high," CommonWealth Magazine, Winter 2005, accessed April 6<sup>th</sup>, 2013, <a href="http://www.commonwealthmagazine.org/News-and-Features/Inquiries/2005/Winter/MCAS-hasnt-erased-the-need-for-remedial-classes-in-community-colleges.aspx">http://www.commonwealthmagazine.org/News-and-Features/Inquiries/2005/Winter/MCAS-hasnt-erased-the-need-for-remedial-classes-in-community-colleges.aspx</a>.

<sup>&</sup>lt;sup>29</sup> James Vazniz, "MCAS tied to college success for Hub grads," Boston Globe, December 2010, accessed April 6, 2013,

http://www.boston.com/news/local/massachusetts/articles/2010/12/07/mcas has aided college success amon g boston students study reports/.

Massachusetts Department of Elementary and Secondary Education, "Plans of High School Graduates Report," accessed April 6, 2013,

 $<sup>\</sup>underline{\text{http://profiles.doe.mass.edu/state\_report/plansofhsgrads.aspx?mode=\&orderBy=\&year=2003\&filterBy.}$ 

<sup>&</sup>lt;sup>31</sup> James Vazniz, "MCAS tied to college success for Hub grads."

<sup>&</sup>lt;sup>32</sup> Sean F. Reardon, "The Widening Achievement Gap between the Rich and the Poor: New evidence and Possible Explanations," in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Choices,* ed. Greg J. Duncan and Richard J. Murnane (New York: Russell Sage Foundation; Chicago: Spencer Foundation, 2011), 93, http://cepa.stanford.edu/sites/default/files/reardon%20whither%20opportunity%20-%20chapter%205.pdf.

frequently than their peers and are less likely to graduate.<sup>33</sup> While these are important factors for a child's success, the greatest predictor for low-income students' academic achievement is believed to depend on their mother's academic achievement level.<sup>34</sup> The United States National Institute of Health found "that a mother's reading skill is the greatest determinant of her children's future academic success, outweighing other factors, such as neighborhood and family income." <sup>35</sup>

The Governor of Massachusetts, Deval Patrick, has pledged to bridge the achievement gap in the state by investing public funds in programs to improve student performance in disadvantaged subgroups, such as low-income students. <sup>36</sup> A student in Massachusetts qualifies as low-income if he meets one of the following requirements: "[the] student is eligible for free or reduced price lunch; or [the] student receives Transitional Aid to Families benefits; or [the] student is eligible for food stamps." <sup>37</sup> Low-income students have consistently underperformed on the MCAS exams when compared with the overall state score. <sup>38</sup> The consequences of this may be most significant for low-income students who live in urban areas. A 2008 Harvard study found that, "for urban low-income students on the margin of passing, failing the 10<sup>th</sup> grade mathematics examination reduces the probability of on-time graduation by eight percentage points." <sup>39</sup> These urban low-income students are also significantly more likely to fail a retest than suburban students of a similar skill level. <sup>40</sup>

The figures below, which depict the comparison between low-income 10th grade MCAS scores and overall state scores in English Language Arts and Mathematics, suggest that while there is clearly a gap in achievement between these two groups, the achievement gap in both of these

Misty Lacour and Laura D. Tissington, "The effects of poverty on academic achievement," *Educational Research and Reviews* 6 (2011): 522-524, accessed April 17, 2013,

http://www.academicjournals.org/err/pdf/pdf%202011/july/lacour%20and%20tissington.pdf.

<sup>&</sup>lt;sup>34</sup> U.S. Department of Heath and Human Services, "Improving mothers' literacy skills may be the best way to boost children's achievement," October 25, 2010, accessed April 17, 2013, http://www.nih.gov/news/health/oct2010/nichd-25.htm.

<sup>&</sup>lt;sup>35</sup> U.S. Department of Heath and Human Services, "Improving mothers' literacy skills may be the best way to boost children's achievement."

<sup>&</sup>lt;sup>36</sup> Governor's Budget FY 2014, "Investing in Education to Close the Achievement Gap," accessed April 17, 2013, http://www.mass.gov/bb/h1/fy14h1/exec 14/hbudbrief1.htm.

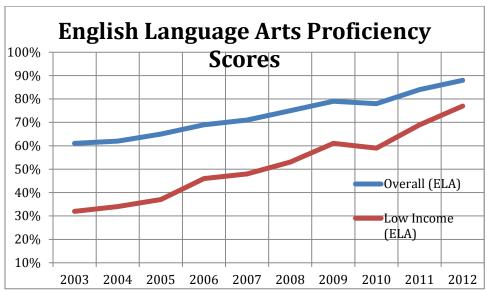
Massachusetts Department of Elementary and Secondary Education, "Profiles Help – About the Data," accessed April 17, 2013, <a href="http://profiles.doe.mass.edu/help/data.aspx">http://profiles.doe.mass.edu/help/data.aspx</a>.

Massachusetts Department of Elementary and Secondary Education, "2003-2012 MCAS Results by Subgroup by Grade and Subject," September 27, 2012, accessed April 17, 2013, http://profiles.doe.mass.edu/mcas/subgroups2.aspx?linkid=25&orgcode=00000000&fycode=2012&orgtypecode=

John P. Papay, Richard J. Murnane, and John B. Willet, "The Consequences of MCAS Exit Examinations for Struggling Low-Income Urban Students," Harvard Graduate School of Education, July 2008, accessed April 17, 2013, http://www.doe.mass.edu/research/reports/0708papay-murnane-willett.pdf, p.1.

<sup>&</sup>lt;sup>40</sup> John P. Papay, Richard J. Murnane, and John B. Willet, "The Consequences of MCAS Exit Examinations for Struggling Low-Income Urban Students."

subjects appears to be shrinking. When examining data from the Massachusetts Department of Elementary Education we found that since 2003 low-income students narrowed the gap in student's achieving proficient in math by eight percent and in English by 18%, suggesting that low-income students are drawing closer to the overall state level's achievement on the exam. However, while the gains are significant there still remains a substantial gap between the two groups. It is worth noting that when the scores of grades three and eight are combined with the  $10^{th}$  grade scores, low-income students achieve a proficient or better score around 20% below average in both subjects. <sup>41</sup> This could also be connected with the fact that low-income students have a higher rate of dropouts and a higher rate of obtaining GED's than non-low-income students.

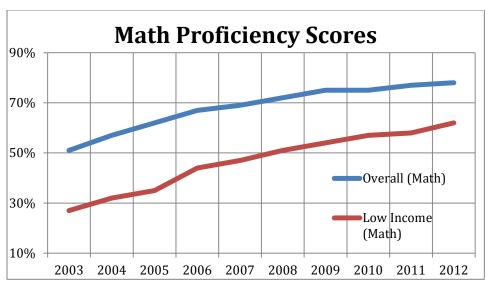


**Figure 4:** Tenth Grade MCAS English Language Arts Proficiency Scores for Low-Income Students Versus Overall State Scores.

Source: Massachusetts Department of Elementary and Secondary Education, "2003-2012 MCAS Results by Subgroup by Grade and Subject," September 27, 2012.

<sup>&</sup>lt;sup>41</sup> Massachusetts Department of Elementary and Secondary Education, "2003-2012 MCAS Results by Subgroup by Grade and Subject."

<sup>&</sup>lt;sup>42</sup> Massachusetts Department of Elementary and Secondary Education, "Graduation Rate Report for All Students," 2012, accessed April 6<sup>th</sup>, 2013, <a href="http://profiles.doe.mass.edu/state\_report/gradrates.aspx">http://profiles.doe.mass.edu/state\_report/gradrates.aspx</a>.



**Figure 5:** Tenth Grade MCAS Mathematics Proficiency Scores for Low-Income Students Versus Overall State Scores.

Source: Massachusetts Department of Elementary and Secondary Education, "2003-2012 MCAS Results by Subgroup by Grade and Subject, September 27, 2012.

MCAS data relating to the low-income subgroup is useful, however, on its own, it is not enough to make broad conclusions about the academic achievement gap in Massachusetts. The poverty guidelines, which determine who is eligible for certain government programs vary from year to year, so student's income status is subject to change. The United States' recent economic recession pushed many families below the low-income line. The loss of family income created an influx of students into low-income status. Low-income status rose 8.1% in Massachusetts between the 2006-2009 and 2012-2013 academic year. It is likely such an increase of students into the low-income subgroup had an effect on the MCAS data.

# **High Stakes Testing**

A high-stakes examination is a test where "crucial decisions are made about a student, teacher, or school based on the results of the test." Supporters of these exams believe they are the

http://www.bizjournals.com/boston/blog/bbj research alert/2013/01/poverty-in-massachusetts-enrollment.html.

<sup>&</sup>lt;sup>43</sup> U.S. Department of Health and Human Services Office of The Assistant Secretary for Planning and Evaluation, "2013 Poverty Guidelines," accessed April 17, 2013, <a href="http://aspe.hhs.gov/poverty/13poverty.cfm">http://aspe.hhs.gov/poverty/13poverty.cfm</a>.

<sup>&</sup>lt;sup>44</sup> Craig Douglas, "Poverty in Massachusetts: Student enrollment in federal lunch program soars (BBJ DataCenter)," January 11, 2013, accessed April 17, 2013,

<sup>&</sup>lt;sup>45</sup> Massachusetts Department Elementary and Secondary Education, "2012-13 Selected Populations Report," accessed April 17, 2013,

 $<sup>\</sup>frac{http://profiles.doe.mass.edu/state\_report/selectedpopulations.aspx?year=2013\&mode=district\&Continue.x=6\&C\_ontinue.y=5.$ 

<sup>&</sup>lt;sup>46</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents," 2013, accessed April 11, 2013, <a href="http://www.pbs.org/wgbh/pages/frontline/shows/schools/etc/guide.html#6.">http://www.pbs.org/wgbh/pages/frontline/shows/schools/etc/guide.html#6.</a>

best way to evaluate student, teacher, and school performance. <sup>47</sup> Supporters also claim these tests will help ensure that disadvantaged students who score poorly will receive more support by having their schools held accountable, and it "will ensure that all students have certain proficiencies and are not left behind or are falsely promoted from grade to grade." <sup>48</sup> Backers for the high-stakes exams argue that the exams will "raise the bar" for student performance and "send a strong message to student's teachers, school leaders, and parents that student's must meet proficiency levels." <sup>49</sup> Another response in favor of high-stakes tests espouses the belief that performance results are the most precise way to measure a student's abilities by comparing them to "specific criteria." <sup>50</sup> Supporters also argue that schools should be rewarded financially for meeting the standards and receiving high scores. <sup>51</sup> This provides the "incentives [that] will motivate school leaders and teachers to teach effectively and raise student performance."

While there is support backing the use of high-stakes exams for graduation requirements, teacher and school accountability, and financial reward, <sup>53</sup> there is also significant opposition to the use of these exams. Some of the strongest oppositions are formed behind Campbell's law which states: "The more any quantitative social indicator is used for social decision making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor." <sup>54</sup> There are two main ways in which Campbell's law manifests itself in Massachusetts via high-stakes examinations: score inflation and narrowing the curriculum. <sup>55</sup>

Score inflation is the alteration or misrepresentation of test scores in order to falsely indicate improvement. Score inflation can occur in many ways, from cheating, on behalf of students, teachers and administrators, to the exclusion of low-performing students from the final results. <sup>56</sup> In 2009, administration and teacher cheating influenced MCAS results from a public Massachusetts school. <sup>57</sup> These acts included: telling student's to re-check answers, allowing

<sup>&</sup>lt;sup>47</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

<sup>&</sup>lt;sup>48</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

<sup>&</sup>lt;sup>49</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

<sup>&</sup>lt;sup>50</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

<sup>&</sup>lt;sup>51</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

 $<sup>^{\</sup>rm 53}$  Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

Sharon L. Nichols and David C. Berliner, "The Inevitable Corruption of Indicators Through High-Stakes Testing," Arizona State University, 2005, accessed April 11, 2013, <a href="http://epsl.asu.edu/epru/documents/EPSL-0503-101-EPRU.pdf">http://epsl.asu.edu/epru/documents/EPSL-0503-101-EPRU.pdf</a>.

<sup>&</sup>lt;sup>55</sup> Sharon L. Nichols and David C. Berliner, "The Inevitable Corruption of Indicators Through High-Stakes Testing."

<sup>&</sup>lt;sup>56</sup> Sharon L. Nichols and David C. Berliner, "The Inevitable Corruption of Indicators Through High-Stakes Testing."

Massachusetts Department of Education, "Summary Report of Department of Elementary and Secondary Investigation of MCAS Irregularities at Robert M. Hughes Academy Charter School," 2010, accessed April 11, 2013, <a href="http://archives.lib.state.ma.us/bitstream/handle/2452/46983/ocn549579085.pdf?sequence=1">http://archives.lib.state.ma.us/bitstream/handle/2452/46983/ocn549579085.pdf?sequence=1</a>.

students to view MCAS material prior to the exam administration, and pressuring teachers to be on board with this scheme. <sup>58</sup>

Another way in which score inflation can be seen is through the cheating of individual students. <sup>59</sup> Student cheating is also seen in the form of impersonation. <sup>60</sup> Lastly, score inflation also occurs due to the exclusion of low-scoring students from the results. It is argued that instead of helping disadvantage students reach the bar set by these high-stakes exams, under the No Child Left Behind Act specifically, there is, "a strong incentive to retain students in the ninth grader or push them out." <sup>61</sup> Those opposed to high-stakes exams under the NCLB make the case that they stress meeting proficiency score quotas and forget about the graduation rate, thus while the proficiency levels of the school may be increasing, fewer of their enrolled students are actually graduating. <sup>62</sup>

The other main idea associated with Campbell's law is the narrowing of the curriculum. Critics contend that students are now being taught solely the material that is on the test, specifically basic skills, rather than the broader school curriculum. While this may increase proficiency scores, it neglects many of the areas that classes used to cover, and in some cases whole subject areas.<sup>63</sup>

Along with the two main ideas that fall in accordance with Campbell's law, there are other noteworthy criticisms made surrounding the use of high-stakes exams. It is disputed that these tests can be "culturally biased," do not respectively reflect the true proficiency of "students who process information differently," is not an ample gauge of performance, and that by basing financial rewards on these test schools with low scores, most likely those needing the most help, are neglected. Other oppositions include the anxiety that is partnered with these exams and the fact that "test-making is far from a perfect science." Another strong argument is that

<sup>&</sup>lt;sup>58</sup> Massachusetts Department of Education, "Summary Report of Department of Elementary and Secondary Investigation of MCAS Irregularities at Robert M. Hughes Academy Charter School," 2010.

Sharon L. Nichols and David C. Berliner, "The Inevitable Corruption of Indicators Through High-Stakes Testing." Alison Stewart and Catherine Davis, "The Perfect Score: Cheating on the SAT," CBS News: 60 Minutes, 2012, accessed April 11, 2013, <a href="http://www.cbsnews.com/8301-18560">http://www.cbsnews.com/8301-18560</a> 162-57348498/the-perfect-score-cheating-on-the-sat/.

<sup>&</sup>lt;sup>61</sup> Robert Balfanz, Nettie Legters, and Thomas C. West, "Are NCLB's Measures, Incentives and Improvement Strategies the Right Ones for the Nation's Low-Performing High Schools?" *American Educational Research Journal* 44 (2007): 559-593, accessed April 11, 2013,

 $<sup>\</sup>frac{https://resources.oncourse.iu.edu/access/content/user/pamagee/Y520\%20Summer\%2008/AERA\%20AYP\%20Artic\\ \underline{le.pdf.}$ 

Robert Balfanz, Nettie Legters, and Thomas C. West, "Are NCLB's Measures, Incentives and Improvement Strategies the Right Ones for the Nation's Low-Performing High Schools?"

<sup>&</sup>lt;sup>63</sup> Lorrie, A. Shepard, "Will National Tests Improve Student Learning?" 1992, accessed April 11, 2013, <a href="http://www.cse.ucla.edu/products/reports/TECH342.pdf">http://www.cse.ucla.edu/products/reports/TECH342.pdf</a>.

<sup>&</sup>lt;sup>64</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

<sup>&</sup>lt;sup>65</sup> Public Broadcasting Service, "Frontline: Testing Our Schools, A Guide for Parents."

often times the meaning of proficiency becomes arbitrary when each state has their own definition. <sup>66</sup>

#### Vermont and Massachusetts

Both Vermont and Massachusetts consistently rank highly on nationwide reports and assessments based upon elementary and secondary educational programs. <sup>67</sup> The states are generally placed within ten spots of each other when it comes to student educational indicators. In 2011, Vermont placed first in terms of public school revenue per student, whereas Massachusetts placed eighth. <sup>68</sup> In the same time period, Massachusetts was ranked first in the percent of adults 25 to 64 with a Bachelor's degree, while Vermont was ranked sixth. <sup>69</sup> Furthermore, in 2012 Vermont and Massachusetts were ranked two and eight, respectively, in high school graduation rates. <sup>70</sup>

At the time of this report in 2013, 45 states including Vermont and Massachusetts have adopted the "Common Core State Standards." The Common Core State Standards are the initial attempt at a nationwide educational standard for high schools in order to create a baseline standard, which will "clearly communicate what is expected of students at each grade level." In Vermont, the Common Core Standards will replace the New England Common Assessment Program (NECAP) test, which is currently in use. In Massachusetts, "the Common Core Standards will continue to be assessed through the Massachusetts Comprehensive Assessment System (MCAS)."

 $<sup>^{66}</sup>$  Sharon L. Nichols and David C. Berliner, "The Inevitable Corruption of Indicators Through High-Stakes Testing."

<sup>&</sup>lt;sup>67</sup> Education Week, "State Report Cards: Overall Grades & Scores," 2012, accessed April 6<sup>th</sup>, 2013. http://www.edweek.org/ew/qc/2012/16src.h31.html.

<sup>&</sup>lt;sup>68</sup> National Education Association, "Rankings and Estimates: Rankings of the States 2011 and Estimates of School Statistics 2012," December 2011, accessed April 6<sup>th</sup>, 2013,

http://www.nea.org/assets/docs/NEA Rankings And Estimates FINAL 20120209.pdf.

NCHEMS Information Center for Higher Education Policy Making and Analysis, "American Community Survey Educational Attainment by Degree-Level and Age-Group," 2011, accessed April 6<sup>th</sup>, 2013, <a href="http://www.higheredinfo.org/dbrowser/index.php?submeasure=250&year=2011&level=nation&mode=graph&state=0">http://www.higheredinfo.org/dbrowser/index.php?submeasure=250&year=2011&level=nation&mode=graph&state=0</a>.

<sup>&</sup>lt;sup>70</sup> America's Health Rankings, "High School Graduation Rate: 1990-2012," 2012, accessed April 6<sup>th</sup>, 2013, http://www.americashealthrankings.org/all/graduation.

<sup>&</sup>lt;sup>71</sup> Common Core State Standards Initiative, "Read the Common Core Standards," 2010, accessed September 19, 2013, <a href="http://www.corestandards.org/the-standards">http://www.corestandards.org/the-standards</a>.

<sup>&</sup>lt;sup>72</sup> Vermont Agency of Education, "Common Core State Standards Implementation Guide," April 2013, accessed September 19, 2013, http://education.vermont.gov/documents/EDU-CCSS Implementation Guide.pdf.

<sup>73</sup> Massachusetts Department Elementary and Secondary Education, "Education Board adopts Common Core Standards to keep Massachusetts Students national leaders in education," July, 2010, accessed September 19, 2013, http://www.doe.mass.edu/news/news.aspx?id=5634.

#### Conclusion

While Massachusetts has emerged as an elementary and secondary educational hub in recent times, it is impossible to say whether these gains have been made due to MCAS implementation, or in spite of. This is especially true when taking into account changes in the population, and school system, as well as more intangible changes such as the actual knowledge amassed by students within Massachusetts's public schools. Regardless, Massachusetts has become a de facto leader in terms of U.S. education. We believe the effectiveness of the MCAS will better be answered once the Common Core Standards implementation process is complete.

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This report was completed on October 21, 2013 by Meagan Borofsky, TJ Bowse, and Stephen-George Davis II under the supervision of Acting Director Kate Fournier in response to a request from Representative David Sharpe.

Contact: Kate Fournier, 532 Old Mill, The University of Vermont, Burlington, VT 05405, phone: 802-656-3050, email: <a href="mailto:kate.fournier@uvm.edu">kate.fournier@uvm.edu</a>.

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