



Guide to Understanding the 2009 Annual Measurable Achievement Objectives (AMA) Reports

This document describes the methodology used to establish Annual Measurable Achievement Objectives (AMAOs) based on Massachusetts English Proficiency Assessment (MEPA) and Adequate Yearly Progress (AYP) data from the 2008-09 school year.

Background

Title III of the No Child Left Behind Act (NCLB) requires that limited English proficient (LEP) students be assessed annually to measure both their progress toward and their attainment of English language proficiency. The spring 2009 administration of the Massachusetts English Proficiency Assessment (MEPA) was the first administration of redesigned MEPA tests and the sixth year of the MEPA program, which is part of the Massachusetts Comprehensive Assessment System (MCAS). The MEPA tests were redesigned to more accurately measure the level of English proficiency of limited English proficient (LEP) students and to be more useful to educators in making reclassification decisions for students.

The new MEPA tests were designed to mirror the MCAS program more closely and to provide more detailed and comprehensive information about students at the upper and lower end of the LEP performance continuum in each grade span. In addition to new item types and passages, the results of the new MEPA tests are reported using different scaled scores and performance levels. While the old MEPA reported results based on four performance levels and scaled scores ranging from 300 to 400, the new MEPA reports results based on five performance levels and a scale ranging from 400 to 550.

The new MEPA tests will be administered in both fall and spring of each academic year. All grade 1 LEP students, as well as LEP students newly transferred into a Massachusetts school in grades 2–12, are required to participate in the fall MEPA tests in order to establish a baseline score that can be compared to the spring MEPA score to measure progress. All LEP students in grades K–12 are required to participate in spring MEPA tests. In spring 2008 and fall 2008, the old version of MEPA was administered to LEP students in grades 3–12 and students in grades K–2 were assessed with the IDEA Language Proficiency Test (IPT) in reading and writing.

Annual Measurable Achievement Objectives (AMAOs)

The Massachusetts Department of Elementary and Secondary Education is required by Title III of the NCLB to establish AMAOs for the English language acquisition and academic achievement of LEP students. AMAOs are established for students in grades K–12, in three categories: (1) progress toward acquiring English language proficiency; (2) attainment of English

language proficiency; and (3) Adequate Yearly Progress of the LEP subgroup in both English language arts and mathematics.

The Department generates AMAO reports for the state overall and for all districts receiving federal Title III funds in FY08 and FY09.

Because the results from the old MEPA tests are not reported based on the same scale or performance levels as the new MEPA, it was necessary to statistically transform the results during this transitional year to establish the progress targets for students in grades 3–12. For students in grades K–2, the differences between the IPT test and the new K-2 MEPA test are so substantial that the results could not reasonably be compared.

The Department opted to use a statistical method to compress the scores from the new scale onto the old scale in order to compare the results. This simplified the AMAO calculation process because progress measures were already established under the old MEPA performance levels. New definitions of AMAO progress will be established next year in order to compare the MEPA results from spring and fall of 2009 to the spring 2010 results.

2009 Progress Determinations and Targets

As in past years, the 2009 progress determinations are based on LEP students who participated in all portions of the MEPA examination (reading, writing, listening and speaking) in spring 2009 and who had a baseline performance level, either from spring 2008 or fall 2008.

The old MEPA results were reported in four performance levels: *Beginning*; *Early Intermediate*; *Intermediate*; *Transitioning*. For the purpose of measuring progress each of the first three performance levels has been divided into two performance level steps (numbered 1–6) and all students at the top level are assigned to step 7.

For students whose baseline MEPA score is from the *same* grade-span test as in spring 2008, the Department defined progress toward acquiring English language proficiency as advancing by two or more performance level steps. For students whose baseline MEPA score is from an *earlier* grade-span test than in spring 2009, progress is defined as advancing one or more steps. Students with baseline MEPA scores at the highest step who remain at the highest step in spring 2009 are considered to have made progress. For instance, a student who performed at Step 4 on the grade span 3-4 test would have to perform at Step 6 if he or she took the grade span 3-4 test again, but would have to reach Step 5 on the grade span 5-6 test to be “making progress.”

The state target for districts in 2009 is that 60 percent of LEP students will make progress toward acquiring English proficiency. Overall district performance is measured against this target.

Using the MEPA results from spring 2006, 2007 and 2008, the Department used a combination of regression and equipercetile equating techniques to establish the following concordance (or lookup) to map the new MEPA results shown in Table 1 on the next page:

Table 1: New to old MEPA concordance table

The numbers in the table below was calculated using a regression-based equipercentile method of equating. The new MEPA results were mapped back to the AMAO steps used in 2006, 2007 and 2008. A regression method was used rather than an average to account for the trends in MEPA performance over the past. For instance, in Grade span 5-6 the percentage of students at Step 1 has steadily declined from 10.2 to 7.4 percent between 2006 and 2008, so the best fit for the 2009 results was estimated at the point where 6.5 percent of the students were in Step 1. The assumption behind this method is that the 2009 performance of students on the new MEPA tests would follow the trend line of the old MEPA tests.

Grade-Span	2009 Scale Score Range (new MEPA)		AMAO Steps (old MEPA)	Cumulative Percentages of Students in Each Level				Percentages of Students in Each Level			
	Min	Max		Old MEPA		New MEPA		Old MEPA		New MEPA	
				Spring 2006	Spring 2007	Spring 2008	Spring 2009	Spring 2006	Spring 2007	Spring 2008	Spring 2009
3-4	400	435	1	6.6	7.1	5.4	5.3	6.6	7.1	5.4	5.3
	436	445	2	9.4	9.9	8.2	8.2	2.8	2.8	2.8	2.9
	446	454	3	13.1	13.8	12.1	12.2	3.7	3.9	3.9	4.0
	455	463	4	19.5	20.7	18.8	18.7	6.4	6.9	6.7	6.6
	464	472	5	29.7	29.9	29.1	29.3	10.2	9.2	10.3	10.6
	473	482	6	47.9	46.1	47.2	47.5	18.2	16.2	18.1	18.2
	483	550	7	100.0	100.0	100.0	100.0	52.1	53.9	52.8	52.5
5-6	400	437	1	10.2	9.7	7.4	6.5	10.2	9.7	7.4	6.5
	438	448	2	13.9	13.9	11.0	10.2	3.7	4.2	3.6	3.7
	449	455	3	18.5	18.6	14.9	13.9	4.6	4.7	3.9	3.7
	456	464	4	25.3	25.5	21.4	19.7	6.8	6.9	6.5	5.8
	465	476	5	40.5	41.1	36.0	35.4	15.2	15.6	14.6	15.8
	477	487	6	58.2	59.2	53.9	53.9	17.7	18.1	17.9	18.5
	488	550	7	100.0	100.0	100.0	100.0	41.8	40.8	46.1	46.1
7-8	400	452	1	14.0	14.6	13.4	13.1	14.0	14.6	13.4	13.1
	453	460	2	19.0	19.8	18.8	18.6	5.0	5.2	5.4	5.5
	461	466	3	24.0	24.8	24.5	23.9	5.0	5.0	5.7	5.3
	467	473	4	30.6	33.1	31.1	32.0	6.6	8.3	6.6	8.1
	474	483	5	45.1	49.0	45.6	47.4	14.5	15.9	14.5	15.4
	484	492	6	59.9	65.3	62.2	64.1	14.8	16.3	16.6	16.6
	493	550	7	100.0	100.0	100.0	100.0	40.1	34.7	37.8	35.9
9-12	400	455	1	17.3	15.9	14.7	13.4	17.3	15.9	14.7	13.4
	456	460	2	23.5	21.9	20.1	18.0	6.2	6.0	5.4	4.6
	461	463	3	27.8	25.6	23.9	22.4	4.3	3.7	3.8	4.4
	464	470	4	35.2	34.0	31.4	29.5	7.4	8.4	7.5	7.2
	471	480	5	49.5	47.4	46.5	44.8	14.3	13.4	15.1	15.3
	481	490	6	67.3	65.5	65.2	62.7	17.8	18.1	18.7	17.9
	491	550	7	100.0	100.0	100.0	100.0	32.7	34.5	34.8	37.3

2009 Attainment Target

Attainment of English language proficiency was defined as scoring at the *Transitioning* level on the old MEPA tests, the point at which students may be ready to exit LEP programs. Statewide data and research indicate that there are two distinct factors that most closely correlate with the likelihood that a student was able to reach that level of performance by the end of a given year: (a) the number of years a student has been in U.S. schools; and (b) the student’s grade. For instance, many fewer kindergartners and first graders are performing at the highest level on MEPA than high school students.

Because attainment targets are based on the most recent assessment, the new MEPA performance levels (*Level 1, Level 2... Level 5*) are used. Because the *Level 4* is meant to signal the point at which a student may become a good candidate to exit English language learner services, the mid-point of Level 4 was chosen as the minimum attainment target. Because the score needed to reach *Level 4* varies the mid-point of the *Level 4* also varies on each grade span test as illustrated in Table 2 below:

Table 2: 2009 MEPA Attainment Targets

Grade Span	Scaled Score Range for Attainment Target
K-2	492 – 550
3-4	487 – 550
5-6	489 – 550
7-8	493 – 550
9-12	494 – 550

Analysis of the 2009 MEPA data indicates that the characteristics of the LEP student population, varies widely from district to district. Based on this distribution, the Department used statewide data to set individual 2009 attainment targets for each district based on the grade span and number of years in Massachusetts of the population served. The 2009 MEPA attainment targets for each student, based on years in Massachusetts and grade span, are shown in the Table 3 below:

Table 3: 2009 MEPA Attainment Targets

		2009 Attainment Targets				
		Years In Massachusetts				
		1	2	3	4	5+
Grade Span	K-2	0	18	47	38	6
	3-4	11	25	40	44	53
	5-6	12	25	33	45	51
	7-8	11	21	33	38	43
	9-12	15	23	29	31	36

Using the table each student is assigned a target, so for example 18 percent of students in their second year of Massachusetts schooling who took the grade span K–2 test should reach their attainment target in 2009 to meet the AMAO. Additionally, 51 percent of students in their fifth year or more of Massachusetts schooling who took the grade span 5–6 test should reach their attainment target in 2009. These AMAOs were established based on actual state data; the targets were challenging, but not impossible, to attain.

Because each district's LEP population has different numbers of students in each grade who have been in Massachusetts for differing numbers of years, each district is likely to have a different attainment target. Individual district targets are established by multiplying the number of students at each baseline performance level step by the state targets for attainment in the table above and taking the average of the targets for the students they serve. District targets are reset each year depending on the composition of the LEP students served.

Through this approach, a district with a large number of Year 5 students in the upper elementary and middle school grades will have a higher target than a district serving a majority of Year 1 and Year 2 students in kindergarten and first grade. A district must meet its overall target and at least half of its individual year targets to receive a positive AMAO determination for attainment.

AYP in English Language Arts and Mathematics for LEP Subgroup

To receive a positive Adequate Yearly Progress (AYP) determination, a district must meet:

- 1) the 95% MCAS student participation requirement;
- 2) the 92% average attendance target or 1% attendance improvement; and either
- 3) the state's 2009 performance target for each MCAS subject, or
- 4) the district's own 2009 improvement target. The 2009 performance targets are a

Composite Performance Index (CPI) of 90.2 points for ELA and 84.5 for mathematics. The amount of CPI increase a district is expected to achieve during a particular rating cycle is based on the gap between that district's baseline CPI and a CPI of 100 which is the 2014 performance target for all Massachusetts schools and districts.

AYP determinations used in 2009 AMAO reports are based on results for LEP students in all grades combined (English language arts and mathematics: grades 3–8 and 10). More information on how AYP is determined is available at:

<http://www.doe.mass.edu/sda/ayp/2009/>.