All Metric Process Technical Documentation

Fall 2018

METRIC NOTES:

Achievement Gap – ELA & Math

1. Percent proficient at each school by grade level for each racial group (White/Asian and Black/Hispanic)
2. Assign points by grade level:
    a. 100 pts: 2017-18 achievement gap is less than or equal to 0 or at least 1 less than the target
    b. 75 pts: 2017-18 achievement gap is more than 0 and is within 1 of the target (including exactly 1 above)
    c. 50 pts: 2017-18 achievement gap is more than 0, more than 1 greater than the target, and is at least 1 less than 2016-17 achievement gap
    d. 25 pts: 2017-18 achievement gap is more than 0, more than 1 greater than the target, and within 1 of the 2016-17 achievement gap (including exactly 1 greater)
    e. 0 pts: 2017-18 achievement gap is more than 0, more than 1 greater than the target, and more than 1 greater than 2016-17 achievement gap
    f. Note: if a school only has data for 2017-18, its score is based on that gap and target without comparison (can only be scores 100 or 75). If a school only has data for 2016-17, it is scored “NA”.
3. If a school has scores for K-8 and 9-12, average the two point values weighted by enrollment at each grade level

Whether School is Meeting MCAS Proficiency Targets – All Students & Subgroup Metrics

1. Add the 2016-17 score average by school and grade level to the corresponding score increment provided by Boston to create 2017-18 score targets
2. Calculate the difference between the average score in and the school’s target score for high school and K-8 as applicable
3. Assign Points for K-8 schools:
    a. 100 pts: 2017-18 average score is more than 0.5 higher than target
    b. 75 pts: 2017-18 average score is within 0.5 of the target (including 0.5 and -0.5)
    c. 50 pts: 2017-18 average score is more than 0.5 below target and is greater than 2016-17 average score
    d. 25 pts: 2017-18 average score is more than 0.5 below target and is up to 0.5 points below the 2016-17 average score (including exactly 0.5 points below)
    e. 0 pts: 2017-18 average score is more than 0.5 below target and more than 0.5 points below the 2016-17 average score
4. Assign points for high school grades:
    a. 100 pts: 2017-18 CPI average is 97.5 or greater or exceeded the target by more than 1.25
    b. 75 pts: 2017-18 average CPI within 1.25 of the target (including differences of exactly 1.25 and -1.25)
    c. 50 pts: 2017-18 average CPI is more than 1.25 below target and is greater than the 2016-17 average CPI
    d. 25 pts: 2017-18 average CPI is more than 1.25 below target and is up to 2.5 points below the 2016-17 average CPI
    e. 0 pts: 2017-18 average CPI is more than 1.25 below target and is more than 2.5 points below the 2016-17 average CPI
    f. Note: 100 pt group should be assigned last, so “average CPI of 97.5” rule is not overwritten by following logic
5. Note: if a school only has data for 2017-18, its score is based on that percentage without comparison (can only be scored 100 or 75, otherwise NA). If a school only has data for 2016-17, it is scored “NA”.
6. If a school has K-8 and 9-12 grades, calculate the average of K-8 and 9-12 points weighted by the number of students enrolled at each grade level (1-8 vs. 9-12)

% of students well below or below benchmark who move up a performance level by the end of the year on DIBELS

1. Calculate the percentage of students who started the year "Below Benchmark" and improved to "Benchmark" or started "Well Below Benchmark" and improved to "Below Benchmark" or "Benchmark" at each school
2. Assign points:
    a. 100 pts: 60% or more students improved to Benchmark
    b. 75 pts: Less than 60% improved but at least 55% improved
    c. 50 pts: Less than 55% improved but at least 50% improved
    d. 25 pts: Less than 50% improved but at least 40% improved
    e. 0 pts: Less than 40% improved
    f. NA score: Fewer than 10 students at a school
3. Scores
    a. Weighted evenly between years
    b. If a school only has a score for one year, its metric score is the score from that year

Median growth percentile on ACCESS for English Language Learners who are at ELD levels 1, 2, or 3

1. Find the median Growth Percentile of each school for 2016-17 and 2017-18 subsets
2. Calculate the difference between each school's 2016-17 median and 2017-18 median.
3. Assign scores:
    a. 100 pts: 2017-18 median is greater than or equal to 60 or is 15 or more percentiles higher than 2016-17 median
    b. 75 pts: 2017-18 median is less than 60 and more than 50 or is less than 15 more percentiles and 10 or more percentiles higher than 2016-17 median
    c. 50 pts: 2017-18 median is less than 51 and more than 40 or is less than 10 more percentiles and 1 or more percentiles higher than 2016-17 median
    d. 25 pts: 2017-18 median is less than 41 and more than 30 and is less than 1 percentile higher than 2016-17 median
    e. 0 pts: 2017-18 median is less than 31 and is less than 1 percentile higher than 2016-17 median
    f. Note: if a school only has data for 2017-18, its score is based on that median without comparison. If a school only has data for 2016-17, it is scored "NA"
    g. Note: scoring rules should be applied in order from 0 pts to 100 pts to ensure the correct priority

Median SGP – All Students & Subgroup Metrics

1. Find median SGP by school by grade level (K-8 and 9-12) for 2016-17 and 2017-18
2. Calculate the difference between each school's 2016-17 median and 2017-18 median by grade level
3. Assign points by grade level:
    a. 100 pts: Median SGP for 2017-18 is greater than or equal to 60 or is greater than 2016-17 median by at least 15 points
    b. 75 pts: Median SGP for 2017-18 is less than 60 and greater than or equal to 51 OR is between 10 and 15 points higher than 2016-17 median (including exactly 10 pts higher)
    c. 50 pts: Median SGP for 2017-18 is less than 51 and greater than or equal to 41 OR between 1 and 10 points higher than 2016-17 median (including exactly 1 pt higher)
    d. 25 pts: Median SGP for 2017-18 is less than 41 and greater than or equal to 31 and less than 1 pt higher than 2016-17 median
    e. 0 pts: Median SGP for 2017-18 is less than 31 and less than 1 pt higher than 2016-17 median
    f. Note: if a school only has data for 2017-18, its score is based on that median without comparison. If a school only has data for 2016-17, it is scored "NA".
4. For schools with points for grades in K-8 and 9-12, average the points for one overall score, weighted by enrollment per grade level.

Median growth percentile for students who are Proficient on MCAS

1. Create an indicator for students in grades K-8 in 2017-18 who follow the above business rules and had an performance level of "Meets expectations" or "exceeds expectations" in the previous year
2. Create an indicator for students in grades K-8 in 2016-17 who follow the above business rules and had the PARCC performance level of 4 or 5 in 2015-16.
3. Find the median SGP of students with a proficiency indicator for the previous year by school for 2016-17 and 2017-18
4. Assign points to each grade level as follows:
    a. 100 pts: Median SGP for 2017-18 is greater than or equal to 60 or is greater than 2016-17 median by at least 15
    b. 75 pts: Median SGP for 2017-18 is less than 60 and greater than or equal to 51 OR is between 10 and 15 points higher than 2016-17 median (including exactly 10 pts higher)
    c. 50 pts: Median SGP for 2017-18 is less than 51 and greater than or equal to 41 OR between 1 and 10 points higher than 2016-17 median (including exactly 1 pt higher)
    d. 25 pts: Median SGP for 2017-18 is less than 41 and greater than or equal to 31 and less than 1 pt higher than 2016-17 median
    e. 0 pts: Median SGP for 2017-18 is less than 31 and less than 1 pt higher than 2016-17 median
    f. Note: if a school only has data for 2017-18, it's score is based on that median without comparison. If a school only has data for 2016-17, it is scored "NA".
5. Note: 9-12 grades cannot be scored for this metric as 10th graders do not have prior year assessment data

Median growth percentile for students who are Warning/Failing on MCAS

1. Create an indicator for students in grade K-8 in 2017-18 who follow the above business rules and had an performance level of "Partially Meeting Expectations" or "Not Meeting Expectations" in the previous year
2. Create an indicator for students in grades K-8 in 2016-17 who follow the above business rules and had the PARCC performance level of 1 in 2015-16.
3. Find the median SGP of students with a warning/failing indicator for the previous year by school for 2016-17 and 2017-18
    a. If a school has fewer than 20 total students who are warning/failing within one school year, make their median for that year "NA"
4. Assign points to each grade level as follows:
    a. 100 pts: Median SGP for 2017-18 is greater than or equal to 60 or is greater than 2016-17 median by at least 15
    b. 75 pts: Median SGP for 2017-18 is less than 60 and greater than or equal to 51 OR is between 10 and 15 points higher than 2016-17 median (including exactly 10 pts higher)
    c. 50 pts: Median SGP for 2017-18 is less than 51 and greater than or equal to 41 OR between 1 and 10 points higher than 2016-17 median (including exactly 1 pt higher)
    d. 25 pts: Median SGP for 2017-18 is less than 41 and greater than or equal to 31 and less than 1 pt higher than 2016-17 median
    e. 0 pts: Median SGP for 2017-18 is less than 31 and less than 1 pt higher than 2016-17 median
    f. Note: if a school only has data for 2017-18, it's score is based on that median without comparison. If a school only has data for 2016-17, it is scored "NA".
5. Note: 9-12 grades cannot be scored for this metric as 10th graders do not have prior year assessment data

4 yr Graduation Rate– All Student & Subgroups

1. Calculate difference between 2016 "% Graduated" and 2017 "% Graduated" for each subgroup
2. Assign points based on "% Graduated" for each subgroup:
    a. 100 pts: 2017 "% Graduated" is greater than or equal to 95%
    b. 75 pts: 2017 "% Graduated" is less than 95% but greater than or equal to 80%
    c. 50 pts: 2017 "% Graduated" is at least 2.5% greater than 2016 "% Graduated" and 2017 "% Graduated" is less than 80%
    d. 25 pts: 2017 "% Graduated" is less than 2.5% greater than 2016 "% Graduated", no more than 2.5% less than 2016 "% Graduated", and is less than 80%

e. 0 pts: 2017 “% Graduated” is more than 2.5% less than 2016 “% Graduated” and 2017 “% Graduated” is less than 80%
f. Note: if a subgroup only has data for 2016-17, its score is based on that percentage without comparison (can only be scored 100 or 75). If a school only has data for 2015-16, it is scored “NA”.

3. Average points across subgroups (All Students, Asian, White, Latino, Black, SWD, and ELL) for each school

5 yr Graduation Rate– All Student & Subgroups

1. Calculate difference between 2015 “% Graduated” and 2016 “% Graduated” for each subgroup
2. Assign points based on “% Graduated” for each subgroup:
    a. 100 pts: 2016 “% Graduated” is greater than or equal to 95%
    b. 75 pts: 2016 “% Graduated is less than 95% but greater than or equal to 80%
    c. 50 pts: if 2016 “% Graduated” is at least 2.5% greater than 2015 “% Graduated” and 2016 “% Graduated” is less than 80%
    d. 25 pts: 2016 “% Graduated” is less than 2.5% greater than 2015 “% Graduated”, no more than 2.5% less than 2013 “% Graduated”, and is less than 80%
    e. 0 pts: 2016 “% Graduated” is more than 2.5% less than 2015 “% Graduated” and 2016 “% Graduated” is less than 80%
    f. Note: if a subgroup only has data for 2015-16, its score is based on that percentage without comparison (can only be scored 100 or 75, otherwise NA). If a school only has data for 2014-15, it is scored “NA”.
3. Average points across subgroups (All Students, Asian, White, Latino, Black, SWD, and ELL) for each school

Drop-out rates

1. Calculate the difference between each school’s 2016-17 dropout rate and its 2016-17 target
    a. Schools with a 2010-11 rate of 0 are assigned a target of 0 for the next six years
    b. For schools that were not open in 2010-11:
        i. For the first year of data available, divide the dropout rate by 2
        ii. Divide the halved dropout rate from step i by 6 to get the annual decrease for the school’s target dropout rate
        iii. Calculate the subsequent years’ dropout target rates by subtracting the annual decrease from step ii from the previous year’s dropout target
2. Calculate the difference between each school’s 2015-16 rate and 2016-17 rate
3. Assign points:
    a. 100 pts: 2016-17 dropout rate is 0 or is more than 5% below 2016-17 target
    b. 75 pts: 2016-17 dropout rate is within 5% of the school’s 2016-17 target (including exactly 5% above and below)
    c. 50 pts: 2016-17 dropout rate is more than 5% above the school’s 2016-17 target and is at least 5% less than the 2015-16 rate (excluding exactly 5% less)
    d. 25 pts: 2016-17 dropout rate is more than 5% above the school’s 2016-17 target and is within 5% of the 2015-16 rate (including exactly 5% more and including exactly 5% less)
    e. 0 pts: 2016-17 dropout rate is more than 5% above the school’s 2016-17 target and is at least 5% more than the 2015-16 rate (excluding exactly 5% more)
    f. Note: if a school only has data for 2016-17, its score is based on that rate without comparison (can only be scored 100 or 75). If a school only has data for 2015-16, it is scored “NA”.

Percent of student enrolled in college within 16 months of graduation

1. Calculate difference in “Attending Coll./Univ. (%)” column between 2014-15 and 2015-16 data
2. Assign points:
    a. 100 pts: Attending Coll./Univ. (%) in 2015-16 is greater than or equal to 72%
    b. 75 pts: Attending Coll./Univ. (%) in 2015-16 is less than 72% and greater than or equal to 68%
    c. 50 pts: Attending Coll./Univ. (%) in 2015-16 is less than 68% and greater than 2014-15 percentage by more than 2%

d. 25 pts: Attending Coll./Univ. (%) in 2015-16 is less than 68% and within 2% of 2014-15 percentage (including exactly 2% greater and exactly 2% less)
e. 0 pts: Attending Coll./Univ. (%) in 2015-16 is less than 68% and less than 2014-15 percentage by more than 2%
f. No score is assigned if school has a low graduate indicator from step 2

Climate Survey Outcomes

1. For 2016-17 and 2017-18 survey responses:
    a. For each metric outcome, take the average scale value by school code and survey (parent/teacher/student)
        i. For example, for an outcome that includes teacher and student scales, calculate the average of all teacher scales and a separate average for all student scales
    b. For each metric outcome, calculate the unweighted average scale value by survey and school grade level (K8, elementary, middle, and high), and district average
    c. Calculate the difference between each school average and the corresponding school grade level average response for grade levels K8, elementary, middle, and high
    d. Assign point scores per survey subset by the following metric:
        i. 100 pts: school average is at least 0.5 higher than the school level or district average (includes exactly 0.50 higher) OR school average is 3.5 or greater for parent surveys OR school average is 4.375 or greater for teacher and student surveys
        ii. 75 pts: school average is less than 0.5 higher but still greater than or equal to the school level or district average (includes averages being equal, difference of 0)
        iii. 50 pts: school average is within 0.5 less than or equal to the school level or district average (includes exactly 0.50 less)
        iv. 25 pts: school average is more than 0.5 less than school level or district average
        v. 0 pts: school has a less than 30% response rate
            I. This low-response rule overwrites other point scoring
    e. Average scores across surveys within a metric outcome
        i. Evenly weighted average across the number of surveys in the metric
2. Repeat step 1 for 2017-18 survey responses
3. Average each metric's 2016-17 and 2017-18 scores
    a. Evenly weighted average across the two years

Senior Preparedness

1. For 2016-17 and 2017-18 data:
    a. Calculate total percentage of "Very Well" responses for each school over all three questions
2. Calculate the difference between 2016-17 percentage and 2017-18 percentage for each school
3. Assign scores
    a. 100 pts: 2017-18 percentage is greater than or equal to 50%
    b. 75 pts: 2017-18 percentage is greater than or equal to 40% but less than 50%
    c. 50 pts: 2017-18 percentage is greater than or equal to 30% but less than 40%
    d. 25 pts: 2017-18 percentage is less than 30%
    e. 0 pts: No responses
4. Increase scores for schools that increased their percentage by more than 5% if previous year data available:
    a. If score based on step 4 is 75 and school's percentage increased by at least 5%, increase score to 100
    b. If score based on step 4 is 50 and school's percentage increased by at least 5%, increase score to 75
    c. If score based on step 4 is 25 and school's percentage increased by at least 5%, increase score to 50
    d. Note: this step is not applied to the schools without 2016-17 data.

Average Daily Attendance

1. Calculate the average daily attendance by school for 2016-17 and 2017-18
    a. Add the days present by school and divide by the total days present and days absent by school
2. Calculate the difference between the school average attendance in 2016-17 and 2017-18
3. Assign scores by school:
    a. 100 pts: Average daily attendance rate in 2017-18 is greater than 92%
    b. 75 pts: Average daily attendance rate in 2017-18 is exactly 92%
    c. 50 pts: Average daily attendance rate in 2017-18 is less than 92% and is more than 2% greater than the average daily attendance rate in 2016-17
    d. 25 pts: Average daily attendance rate in 2017-18 is less than 92% and is within 2% the average daily attendance rate in 2016-17 (including exactly 2% greater and 2% less)
    e. 0 pts: Average daily attendance rate in 2017-18 is less than 92% and is less than the average daily attendance rate in 2016-17 by more than 2%
    f. Note: if a school only has data for 2017-18, its score is based on that rate without comparison (can only be scored 100 or 75). If a school only has data for 2016-17, it is scored "NA".

Number of out-of-school suspensions per 100 students

1. For 2016-17 data:
    a. Calculate suspension rate by school
        i. Add total suspension incidents by school and divide by school enrollment
    b. Assign scores:
        i. 100pts: Suspension rate of 0
        ii. 75 pts: Suspension rate is greater than 0 but less than 3%
        iii. 50 pts: Suspension rate is greater than or equal to 3% but less than 10%
        iv. 25 pts: Suspension rate is greater than or equal to 10% but less than 25%
        v. 0 pts: Suspension rate is greater than or equal to 25%
2. Repeat step 1 for 2017-18 data
3. Average school scores over the two years
    a. Weighted evenly
    b. If a school is missing from one year, their score is equivalent to the score for the year available

Family Engagement Index

1. Assign points to 2016-17 and 2017-18 data as follows:
    a. 100 pts: School has 4 engagement elements
    b. 75 pts: School has 3 engagement elements
    c. 50 pts: School has 2 engagement elements
    d. 25 pts: School has 1 engagement element
    e. 0 pts: School has 0 engagement elements
2. Average each school's points evenly over the two years

% of teachers that are minority

1. For 2016-17 Teacher data:
    a. Assign points for the percentage of black teachers as follows:
        i. 100 pts: % Black Teachers greater than or equal to 26%
        ii. 75 pts: % Black Teachers greater than or equal to 25% and less than 26%
        iii. 50 pts: % Black Teachers greater than or equal to 20% and less than 25%
        iv. 25 pts: % Black Teachers greater than or equal to 15% and less than 20%
        v. 0 pts: % Black Teachers less than 15%
    b. Assign points for the percentage of other minority teachers as follows:
        i. 100 pts: % Other Minority, calculated in step b, is greater than or equal to 11%
        ii. 75 pts: % Other Minority is less than 11% and greater than or equal to 10%
        iii. 50 pts: % Other Minority is less than 10% and greater than or equal to 7%

iv. 25 pts: % Other Minority is less than 7% and greater than or equal to 5%
v. 0 pts: % Other Minority is less than 5%

c. Average the points for percentage or black teachers and percentage of other minority teachers
i. Evenly averaged across the two scores

2. Repeat step 2 for 2017-18 Teacher data
3. Average scores across years

Teacher retention rate for proficient and exemplary teachers

1. For 2016-17 Teacher data:
   a. Assign points for the retention rate as follows:
      i. 100 pts: Retention rate is greater than or equal to 95%
      ii. 75 pts: Retention rate is less than 95% and greater than or equal to 90%
      iii. 50 pts: Retention rate is less than 90% and greater than or equal to 80%
      iv. 25 pts: Retention rate is less than 80% and greater than or equal to 50%
      v. 0 pts: Retention rate is less than 50%
2. Repeat step 2 for 2017-18 Teacher data
3. Average scores across years

Appendix 1: Calculating Achievement Gap Targets

1. Calculate percent proficient at each school by grade level based for each racial group (White/Asian and Black/Hispanic)
2. Calculate the achievement gap - difference in percent proficiency between the two groups for 2016-17 grade level
   a. Percent proficient White/Asian – Percent proficient Black/Hispanic
3. Divide the gap from step 6 in half
4. Divide the halved gap from step 7 by 6 – this is the target annual decrease
5. Subtract the target annual decrease from the 2017 achievement gap

Appendix 2: Climate Survey Outcome Scales

- Climate Survey Outcome 1: Student climate survey questions on goal-setting and perseverance
  - Social perspective taking (S)
  - Grit (S)
- Climate Survey Outcome 4: Parent, Teacher and Student climate survey results on whether all students are taught by highly effective, caring and committed teachers
  - Professional preparation (T)
  - Pedagogical effectiveness (S)
  - Teacher interest in students (S)
  - Teacher Effectiveness (P)
- Climate Survey Outcome 5: Teacher Climate Survey results on whether school is led by effective instructional leader(s).
  - Instructional Leadership (T)
- Climate Survey Outcome 6: Parent and Student Climate Survey results on preparation for the next grade
  - Curricular strength/variety (T)
- Climate Survey Outcome 8: Student, parent and teacher climate survey on whether school is safe, well-organized and conducive to meeting educational goals.
  - Peer victimization (T)
  - Emotional safety (S)
  - Physical safety (S)
- Climate Survey Outcome 9: Student and teacher climate survey results on whether students are engaged and enthusiastic
  - Student engagement (S)
  - Value of learning (S)
- Climate Survey Outcome 10: Teacher and Parent climate survey results on whether schools ensure all families feel welcomes and are involved

    - Parental engagement (T)
    - Parent Participation in School (P)
    - Barriers to engagement (P)
- Climate Survey Outcome 11: Parent climate survey results on whether school promotes inclusion of all students, families and community stakeholders
    - Community engagement (T)
    - Cultural responsiveness (T)
    - Equity (P)
    - Safe and Welcoming Environment (P)
- Climate Survey Outcome 12: Student and teacher climate survey results on whether school demonstrates a culture of high achievement.
    - Academic press (S)
- Climate Survey Outcome 16: Student, Teacher and parent climate survey results on whether school leadership sets a vision for the school that actively engages the community
    - Principal Effectiveness (P)
- Climate Survey Outcome 17: Teacher climate survey results on whether school leadership creates a culture of collaboration among all staff members.
    - Teacher collaboration (T)
    - Professional community (T)
- Climate Survey Outcome 18: Parent climate survey results on whether school leadership develops clear and effective structures for communication with families and within the school community.
    - NA
- Climate Survey Outcome 19: Student and parent climate survey results on whether school leadership builds community partnerships
    - NA
- Climate Survey Outcome 20: Whether School leadership retains and leverages effective teachers.
    - Quality of professional development (T)
    - Access and quality of resources provided to teachers (T)

Appendix 3: Schools with Incomplete Data

For completeness, scores are assigned when possible for schools with at least one year of data.

- Schools with appropriate data for both the current year and the previous year are scored for all metrics
- Schools with appropriate data for only the most recent year are scored as follows:
    - For metrics that are scored as an average of two years, the score is based solely on the most recent year
    - For metrics that are based on the most recent year's data or based on a comparison to the previous year, the score is based only on the most recent year
    - For metrics that are based on the most recent year's data for some scoring levels and a comparison to the previous year for the other scoring levels, the school receives a score if its most recent year data meets the scoring levels that do not require comparison.
- Schools with appropriate data for only the previous year are scored for metrics that are an average of two years, and the score is based solely on the previous year.

Note:

- All metrics where N is less than 20 is suppressed and scored as N/A except climate survey metrics.