

2018-2019 Value-Added Progress Dimension

Introduction

Ohio's report card includes four value-added measures that receive letter grades. These measures comprise the value-added progress dimension and state law requires them to be graded.

Ohio Revised Code Section 3302.03 (C)(1)(e) and 3302.03(C)(1)(f) say:

(e) The overall score under the value-added progress dimension, or another measure of student academic progress if adopted by the state board, of a school district or building, for which the department shall use up to three years of value-added data as available.

In adopting benchmarks for assigning letter grades for overall score on value-added progress dimension under division (C)(1)(e) of this section, the state board shall prohibit the assigning of a grade of "A" for that measure unless the district's or building's grade assigned for value-added progress dimension for all subgroups under division (C)(1)(f) of this section is a "B" or higher.

For the metric prescribed by division (C)(1)(e) of this section, the state board may adopt a student academic progress measure to be used instead of the value-added progress dimension. If the state board adopts such a measure, it also shall prescribe a method for assigning letter grades for the new measure that is comparable to the method prescribed in division (A)(1)(e) of this section.

(f) The value-added progress dimension score of a school district or building disaggregated for each of the following subgroups: students identified as gifted in superior cognitive ability and specific academic ability fields under Chapter 3324. of the Revised Code, students with disabilities, and students whose performance places them in the lowest quintile for achievement on a statewide basis, as determined by a method prescribed by the state board. Each subgroup shall be a separate graded measure.

Background – Through 2012

Ohio first incorporated a value-added progress dimension into its accountability system in 2007. The calculation is designed to estimate the influence that school districts and buildings have on the academic progress rates of student populations from year to year. Specifically, the calculation measures district and school value-added effects for each subject and grade tested. When it was first implemented, the measure included only those tests administered in consecutive year/grade combinations (i.e. it was calculated for grades 4-8 in reading and math using the data from all tests administered in grades 3-8).

From 2007 through 2012, the estimates were computed based on a single year's growth reported for the Ohio Achievement Assessments (OAAs) in math and reading for fourth through eighth grades using test data for all of the students in the school or district. Scores of "Above", "Met" or "Below" expected growth were assigned based on the amount of growth made by the students. The value added ratings were used to increase or decrease a school's or district's final overall rating

2013 and 2014

Beginning with the 2012-2013 school year, the value-added calculation changed.

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Under the “old” system, a school or district might see its final rating increase or decrease based on its value-added score. As of 2013 this no longer was the case. In 2013, value-added results still used the state’s assessments in math and reading from 4th through 8th grades, but instead of receiving one of three possible ratings that affected the overall designation, districts and buildings received one of five letter grades of A, B, C, D, and F.

In addition, in 2013 and 2014, the calculation not only provided a single year’s estimate for math, reading, and a composite for each grade and across grades, but where possible the letter grades were assigned using a multi-year average composite gain with up to three years of data.

2015 Report Card

In the 2014-2015 school year, the state switched to new state assessments in English language arts, math, science and social studies. The change required the calculation to be reset so that only one year of gains were included when calculating the 2015 letter grades. 2015 also began a two-year transition to use tests in new grades and subjects for each of the calculations.

Ohio’s end of course assessments were phased in slowly, and for the 2014-15 school year only students in grades nine and lower took those assessments while students in grades ten and higher took the OGT. The agency produced and reported a growth calculation using end-of-course exams in 2015, but that growth calculation did not receive a grade. The 2015 report cards included an additional value-added report using end of course exams in algebra I, integrated math 1 and English language arts 1. Any school or district that administered these exams received a report referred to as ‘high school’ on the report card. The report displayed data only – no letter grades because this was the first year that the data were available.

2016 Report Card and Beyond

In 2016, all ELA and math assessments were included to calculate the four graded measure gains at the high school level (algebra I, integrated math 1, English language arts 1, geometry, integrated math 2 and ELA 2). In future years, these six assessments will continue to contribute data towards the four letter grades

The 2016 report card also included additional tests in the calculation for elementary and middle school grades. For the first time, the calculation included the 5th and 8th grade science tests and the 6th grade social studies test.

To explain why these additional tests can be used, it is helpful to understand how the new assessments are different from the old ones. In order to be used in a value-added analysis, a test must meet three criteria. These criteria include:

1. **The test must have sufficient stretch in the scale.** This means that the students’ scores are distributed across the entire range of scores and there are not large numbers of students either scoring too close to the floor of the test or large numbers topping out and earning a perfect score. Sufficient stretch is required to ensure that progress can be measured for both low-achieving and high-achieving students.

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- The test must be highly related to the academic standards for each grade and subject.** In other words, the test does a good job at measuring the academic content that students are expected to know and be able to do for each subject and grade. This is needed so that progress (or a lack of progress) can be gauged across years.
- The test must have a scale that is sufficiently reliable from one year to the next.** Another way to say this is that the test is measuring the same thing from year to year. Students who take the test in different school years will earn a similar score if they have a similar level of knowledge of the standards being tested.

Among Ohio's "old" OAA and OGT assessments, only the reading and math assessments in grades 3-8 met all three of these criteria and were able to be used to measure growth.

Students took OAA tests in science in grades 5 and 8 and they also took five OGT assessments in the 10th grade. All of Ohio's assessments had sufficient stretch in the scales and were reliable across years, but the science tests and the OGT were designed to measure standards across several grades (sometimes called a 'grade band assessment') rather than being highly related to the standards written for just the one grade where the test was administered.

The new state tests in these subjects are not grade band tests. The 5th and 8th grade science assessments align to just the state's standards in those grades and thus can be used in the calculations. Similarly, when the 6th grade social studies assessment was administered (through 2017) it aligned to that grade's standards and could be used.

Because Ohio transitioned to new science and social studies assessments in 2015 AND because these subject areas had never been included before, the decision was made to wait until there were two years of "new" test data to include these tests in the calculation. Thus, the science and social studies assessments in elementary and middle school became part of the A-F letter grade for the first time in 2016. Those same tests were used in 2017, but in 2018, the 6th grade social studies tests ceased to be administered, and thus could no longer be used.

The 4th grade social studies assessment, when it was administered, also aligned to its grade's standards, but wasn't included in the 2016 or 2017 calculations because students in the 4th grade didn't have enough prior year (3rd grade) tests to calculate growth for 4th grade social studies. This test also ceased to be administered in 2018.

Moreover, per state law, only ELA and math assessments are used to measure growth at the high school level. This is because students have options in the science and social studies content areas and can use other assessments (AP or IB) or a college credit plus course grade to fulfill graduation requirements.

In 2016, the calculation used a single year of gains to calculate the letter grades because of the change in test vendors for ELA and math between 2015 and 2016. In 2017, the calculation used two years of data and in 2018 and beyond the calculation will use up to three years of data.

Note that in 2019, this means that all applicable tests taken in the 2016-2017, 2017-2018, and 2018-2019 school years are included in the letter grade calculation, regardless of whether a school or district stops serving a particular grade within that time frame. Thus, if a school served kindergarten through sixth grade

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in 2017 and 2018 and only served kindergarten through fifth grade in 2019, the school's sixth grade tests from 2017 and 2018 would still be used to calculate the letter grades.

Subgroup Value-Added

Beginning in 2013, state law created three new value-added calculations. The report card now contains district and school value-added grades disaggregated for three subgroups of students. The subgroups that now receive reports include: a "gifted" value-added report; a "students with disabilities" value-added report; and a report that includes students whose performance places them in the "lowest quintile for achievement" on a statewide basis.

Each subgroup is a separate graded measure so districts and some schools receive up to four value-added letter grades on their report card. Just like the "overall" or "all students" value-added report, the value-added results for each subgroup analysis calculated in 2013 and 2014 used the math and reading assessments in grades 3-8 to produce a composite gain using all grades between 4-8. The new subgroup calculations began in 2013 so only one year of data was used to build those letter grades. 2014 was the second year of disaggregating the data, and a multi-year average using up to two years of data was used to generate the letter grades. In 2015 and 2016 the data again used only a single year because of the switch to the new state assessments. In 2017, the calculation used two years of gains and in 2018 and beyond three years will be used.

Just like the overall value-added calculation, the three subgroups used additional tests beginning in 2016. If students meet the criteria to be included in a subgroup's calculation (criteria are outlined in each subgroup's description) and they are taking tests in the table below, they are included in the calculation.

Grade	Tests Included
4	ELA, Math
5	ELA, Math, Science
6	ELA, Math
7	ELA, Math
8	ELA, Math, Science
End-of Course	
ELA	ELA I, ELA 2
Math	Algebra, I, Integrated Math I, Geometry, Integrated Math 2

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Grade Scale

Once the growth estimate is calculated, each of the four value-added measures have the estimate divided by the standard error to obtain a growth index. The growth index is used to determine which letter grade the school or district receives. The letter grades are as follows:

Growth Index	Grade
Greater than or equal to +2	A
Greater than or equal to +1 but less than +2	B
Greater than or equal to -1 but less than +1	C
Greater than or equal to -2 but less than -1	D
Less than -2	F

The paragraphs below describe which students are included in each of the three subgroup calculations.

Gifted Value Added

The Gifted value-added measure includes students identified with each of the five types of academic giftedness. The table below shows which assessments place the student in the calculation based on the type of identification made. Note that students are included in this calculation if they are *IDENTIFIED* with the appropriate gifted label; they need not be served.

Gifted Identification Label	Test(s) Included
Reading	4 – 8 grades English Language Arts assessments, ELA I, ELA 2
Mathematics	4 – 8 grades Math assessments, algebra I, geometry, integrated math I, integrated math 2
Science	5 th and 8 th grade Science assessment
Social Studies	No assessments used – students not included in the calculation
Superior Cognitive	Any ELA, Math, and Science assessments from those listed above

To be included in the gifted value-added calculation a student must be identified on or before March 31st of the current school year. Thus, for the 2019 calculation, a student must be identified on or before March 31, 2019. A student identified on April 1, 2019 or later will not be included in the 2019 calculation, but will be included in 2020 and beyond.

Note this business rule addresses when a student must be IDENTIFIED as gifted. It does not mean the student must be reported with a gifted ID code in EMIS by that date. A student is 'identified' on the date the district receives the test score showing that the student met the criteria to be deemed gifted. The district must receive that test score on or before March 31, 2019 for a student to be identified for the 2018-19 school year. A student whose test score is returned to the district on April 1, 2019 or later will count in 2020 and beyond. Districts have until mid-July to report student data to the Ohio Department of Education through the Education Management Information System (EMIS) and all gifted identification data, including IDs from March and earlier and April and later, can be reporting during that window. The date of the identification is used to determine whether the student is included in the 2019 gifted value-added calculation or not.

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The scale used to award the letter grades is as follows:

Gain Index	Grade
Greater than or equal to +2	A
Greater than or equal to +1 but less than +2	B
Greater than or equal to -1 but less than +1	C
Greater than or equal to -2 but less than -1	D
Less than -2	F

Students with Disabilities Value Added

The same March 31, 2019 identification date applies to students identified with a disability. The Students with Disabilities value added measure includes ALL students identified with ANY disability as of March 31, 2019, not just those students whose disability requires an accommodation for the tested subject. Any tests taken from the list below are used for a student who is identified with a disability.

Academic Content Area	Test(s) Included
English Language Arts	4 – 8 grades English language arts assessments, ELA I, ELA 2
Mathematics	4 – 8 grades math assessments, algebra I, geometry, integrated math I, integrated math 2
Science	5 th and 8 th grade science assessment

The scale used to award the letter grades is as follows:

Gain Index	Grade
Greater than or equal to +2	A
Greater than or equal to +1 but less than +2	B
Greater than or equal to -1 but less than +1	C
Greater than or equal to -2 but less than -1	D
Less than -2	F

Lowest 20% Value Added

This calculation measures the growth of students whose test scores place them in the lowest 20% using a statewide distribution of all scores. More information on how students are identified as being in the lowest 20% can be found [here](#).

Because the current calculation is estimating the growth for the 2018-19 school year, students are identified as being in the lowest 20% by averaging their scores from the current (2018-2019) and previous (2017-2018) school years with each subject being averaged separately. Thus, a student can be identified as being in the lowest 20% for one subject (such as ELA) but not for any other subject (such as math or science). A student can also be identified as being in the lowest 20% for all subjects or no subjects.

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The scale used to award the letter grades is as follows:

Gain Index	Grade
Greater than or equal to +2	A
Greater than or equal to +1 but less than +2	B
Greater than or equal to -1 but less than +1	C
Greater than or equal to -2 but less than -1	D
Less than -2	F

Beginning in 2016, the four value added letter grades (Overall, Gifted, Students with Disabilities and Lowest 20%) were combined to produce a Progress Component grade. The calculation for this grade is described below.

Composite Grades

In 2019, the final Progress Component grade assigned to a school or district consists of a weighted average of the four value added letter grades (students overall, gifted students, students with disabilities, and students in the lowest 20% of achievement).

First, the value-added letter grade for each group is converted to points as follows:

Grade	Points
A	5
B	4
C	3
D	2
F	1

Next, each group's points are multiplied by a percentage weight depending on the total number of value added progress grades given to a building or district that year. Note that the value-added grade given for students overall is weighted more heavily than the subgroup value added grades.

Number of Value Added Letter Grades	"Overall Students" Weight	Subgroup Weight
1	100%	N/A
2	71.5%	28.5%
3	63.25%	18.375%
4	55%	15%

Last, the weighted points are added together and the school or district is assigned a final letter grade given the grade scale below. Note that if any of the four value added grades (Overall, Gifted, Students with Disabilities, and Lowest 20%) is a C, D, or F, the final progress grade assigned can be no higher than a B, per Ohio Revised Code 3302.03 (C)(1)(e).

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Total Weighted Points	Progress Grade
4.125 – 5.000	A
3.125 – 4.124	B
2.125 – 3.124	C
1.125 – 2.124	D
0.000 – 1.124	F

High Mobility Value Added

Beginning in 2014, the agency produced an additional value added letter grade for schools and districts that had a large percentage of students who were new to the school or district. This calculation, described below, is referred to as the 'high mobility' value added and it is calculated only for those entities that have a mobility rate of 25% or higher in the current school year (2018-19 for the 2019 report card). Because this grade is calculated only for a very small minority of schools and districts, it is not be used to generate the Progress Component Grade.

In cases where at least 25% of the students are new to the school or district in the current school year, the high mobility grade is calculated using only the test data from students who have been in the entity for at least two years. This report is designed to provide data about how well students are being served when they remain stable, in the same school or district, for multiple years in a row.

The scale used to award the letter grades is as follows:

Gain Index	Grade
Greater than or equal to +2	A
Greater than or equal to +1 but less than +2	B
Greater than or equal to -1 but less than +1	C
Greater than or equal to -2 but less than -1	D
Less than -2	F

This calculation does not combine growth across years. It consists of a single year gain using current year data for students who attended the same school or district for at least the two most recent school years.

SAS Technical Documentation

Ohio uses a contractor, SAS, Inc., to calculate the value-added progress dimension scores. Additional technical documentation about the calculations can be found by clicking [here](#). These documents will provide readers with information about the older calculations and the one that used today.

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EVAAS Website

Ohio's value-added data is available to members of the public by clicking [here](#). Schools can review their unmasked student-level growth data by logging in to the secure EVAAS website with their user name and password. Members of the general public cannot gain access to the secure site due to student-privacy laws, but appropriate school district personnel may contact their district's EVAAS Administrator (a role in OEDS-R) to request that access be established for them.