

2019 A-F Letter Grade Accountability System: Traditional Schools Business Rules

K-8 Model

Finalized on February 7, 2020ⁱ

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Contents

- Introduction*4
- Overview of the A-F Letter Grade Accountability System*5
- Data Inclusion Criteria*6
- A-F Static File*.....9
- Data in the Growth Model*9
- Timeline & Appeals*..... 10
- Appeals:* 10
- Cut Scores*..... 11
- K-8 model:* 12
- 2019 A-F Traditional School Letter Grade Models* 12
- N-Size* 12
- RAEL*..... 13
- K-8 Model*..... 13
- Proficiency* 13
- Percent Tested* 14
- Percent Proficient for Schools that DO NOT Meet 95% Tested* 15
- Growth Model*..... 18
- Normalizing EL Data* 30
- EL Proficiency and Growth*..... 31
- Acceleration/Readiness* 35
- Bonus Points* 43
- Calculating Total Points*..... 46
- Appendix* 48
- List of Acronyms and Abbreviations*..... 48
- List of Statistical Summary Tables and Graph Definitions* 49

Introduction

These business rules detail Arizona's 2019 A-F Traditional K-8 Schools Letter Grade Accountability System for educators, parents, and other stakeholders. The Arizona Department of Education's (ADE) mission is to serve Arizona's education community, ensuring every child has access to an excellent education. As a state, we are also committed to holding schools accountable to this goal using a fair accountability model that differentiates the performance of schools.

Using the A-F Letter Grade Accountability System, Arizona makes annual accountability determinations for K-8 schools based on student academic outcomes, growth, and acceleration/readiness. The accountability system outlined here uses several metrics to measure student learning and growth in Arizona traditional K-8 public schools.

Overview of the A-F Letter Grade Accountability System

As outlined by A.R.S. §15-241, the State Board of Education (SBE) determined the criteria for each school classification. Details regarding A-F and the process can be found at <https://azsbe.az.gov/f-school-letter-grades>. The following outlines the traditional school K-8 model that was approved on January 28, 2019.

The A-F Letter Grade accountability system includes the following:

1. Percentage of proficient students on the AzMERIT grade level or end of course assessment
2. Longitudinal indicators of relative student gain and growth towards proficiency/ maintenance of high proficiency.
3. EL language proficiency and growth
4. Indicators to measure students' ability to accelerate beyond elementary school

Per A.R.S. §15-241 (b), "Each school, charter holder and school district shall submit to the department any data that is required and requested and that is necessary to compile the achievement profile. A school or local education agency that fails to submit the information that is necessary is not eligible to receive monies from the classroom site improvement fund established by section 15-977". The complete A.R.S. §15-241 is available here: <https://www.azleg.gov/ars/15/00241.htm>.ⁱⁱ

Data Inclusion Criteria

AzMERIT, MSAA, AIMS Science, AIMS A Science and AZELLA data were used in the letter grade calculation after validation against the statewide Arizona Education Data Standards (AzEDS). Using the student's AzEDS identification as the unique identifier, integrity checks consider valid student enrollment and accurate student identification on test date relevant to the grade level and subject tested.

The following criteria outline specific details and descriptions of student data included in the calculation of the A-F Letter Grades for schools.

1-Year FAY (Full Academic Year) – Students were included in the proficiency, growth, and acceleration/readiness metrics of the A-F Letter Grade models if they were enrolled within the first ten school days of the school's calendar year and continuously enrolled until the first week day in May (May 1, 2019). Students with breaks in enrollment fewer than 10 calendar days in the same school are still considered FAY.

2-year FAY – Students who are FAY two consecutive years in a row (FY18, FY19) at the same school. 2-year FAY students are not included in 1-year FAY stability calculations.

3-year FAY – Students who are FAY three consecutive years in a row (FY17, FY18, FY19) at the same school. 3-year FAY students are not included in 2-year FAY and 1-year FAY stability calculations.

AZELLA FAY – Students were included in the EL calculations if they were enrolled within the first ten school days of the school's calendar year and continuously enrolled until the last day of the state testing window for AZELLA.ⁱⁱⁱ Students with breaks in enrollment fewer than 10 calendar days in the same school are still considered AZELLA FAY.^{iv}

Chronically Absent – a student is chronically absent if that student has absences (excused and unexcused) greater than 10% of a school's calendar year (e.g., 18 days for a school meeting 5 days per week). Schools can validate how many absences a student has using the STUD10 report in the AzEDS portal on ADEConnect. Additional information on what defines an absence can be found here: <https://www.azleg.gov/viewdocument/?docName=https://www.azleg.gov/ars/15/00901.htm>. Students who are enrolled in Kindergarten or are flagged as chronically ill in AzEDS are removed from the Chronic Absenteeism calculation^v.

Current Year – refers to FY19

EL_FEP – Any student identified with an EL need for Fiscal Year 2019 plus any student identified as Fluent English Proficient 1, 2, 3, or 4 years ago.

English Learner (EL) – Any student identified with an EL need (e.g., with a less than proficient score on AZELLA in the current or prior fiscal year).

Ethnicity – student data submitted via AzEDS in the ethnicity fields (i.e., White, African American,

Hispanic, Native American/Alaskan Indian, Asian, or Pacific Islander) is used for the subgroup calculations.

Fluent English Proficient – Any student identified with an EL need in a prior fiscal year who has reclassified as Proficient on the AZELLA 1, 2, 3, or 4 years ago.

Homeless – student data submitted via AzEDS in the Homeless field. Performance is reported for current year subgroup calculations, no points will be awarded for this subgroup.

Income Eligibility 1 & 2 – student data submitted via AzEDS in the IncomeEligibility1 and IncomeEligibility2 fields are used to define an Income Eligibility 1 & 2 student. A student is defined as Income Eligibility 1 & 2 if the school submits a 1/yes for either the IncomeEligibility1 or IncomeEligibility2 field.

New School – a school opened in the 2018-2019 school year with a new entity ID. These schools will not receive an A-F letter score grade their first year in operation.

N-Size – the minimum number of students required for the indicator to be calculated and the school eligible to earn the points. The N-Size for all indicators is 10 students. The only exception is Grade 5-8 EOC Acceleration.

Parent in Military – student data submitted via AzEDS in the Parent in Military field. Performance is reported for current year subgroup calculations, no points will be awarded for this subgroup. ^{vi}

Prior Year – refers to FY18

Recently Arrived English Learner (RAEL) – A RAEL in the current year is a student who meets the following data criteria: 1) is new to Arizona schools as determined by having his/her first enrollment ever in an Arizona school and 2) is not proficient in English as determined by a less than proficient result on the AZELLA.

Special Education Student – Any student receiving special education services on October 1, 2018 as defined by Federal law. To confirm whether a student meets this criterion, schools can check their SPED07 report in the ESS Census Application. Information regarding the ESS Census process can be found here: <http://www.azed.gov/specialeducation/data-management/federal-sped-census/>

The table below describes the grade-level and FAY requirements for each indicator of the A-F Letter Grade Accountability System.

Indicator	Component	FAY	Grades
Proficiency	AzMERIT ELA and Math	✓	3-8, EOC
	MSAA ELA and Math	✓	3-8, EOC
Growth	Growth on AzMERIT ELA and Math	✓	3-8, EOC
EL	EL Proficiency and Growth	✓	K-8
Acceleration/Readiness	Grades 5-8 HS EOC Math	✓	5-8
	Grade 3 ELA	✓	3
	Chronic Absenteeism		1-8
	Subgroup Improvement	✓	3-8
	Special Education Inclusion	✓	K-8
Bonus	AIMS and AIMS-A Science	✓	4 and 8
	Special Education Enrollment	✓	K-8

Regardless of a student’s special education status, the accountability system uses all verified AzMERIT data from students enrolled the full academic year. For students who take the MSAA assessment and are enrolled the full academic year, these data are used in the Proficiency component but not in the calculation of student growth percentiles or student growth targets (Growth).

Students with a performance level reported from the AzMERIT English Language Arts and Mathematics assessments, MSAA, and AIMS or AIMS A Science are utilized in certain calculations (detailed below). The department does not include AzMERIT, MSAA, AIMS or AIMS A Science test records for students where no answer items are selected and no scale score or performance level is assigned. The following table indicates the only valid performance levels on AzMERIT or MSAA at all grade levels and for all subjects.

AzMERIT/MSAA Achievement Levels	AIMS/AIMS A Science Achievement Levels
Minimally Proficient	Falls Far Below
Partially Proficient	Approaches
Proficient	Meets
Highly Proficient	Exceeds

A-F Static File^{vii}

The A-F static file merges assessment data with enrollment data from AzEDS to serve as the base for the majority of A-F Letter Grade calculations and to help schools understand performance based on various accountability-related business rules (i.e. FAY). Students are included in a school's static file if they meet any of the below criteria:

- Enrolled on the first day of the Fall AzMERIT State Testing Window (11/5/2018)
- Enrolled on the first day of the Spring Menu of Assessments State Testing Window (3/4/2019)
- Enrolled on the first day of the Spring AIMS Science State Testing Window (3/25/2019)
- Enrolled on the first day of the Spring AzMERIT State Testing Window (4/1/2019)

Data in the Growth Model

Valid student assessment results must meet four criteria for inclusion in the growth model:

1. Student enrollment generates ADM in any Arizona public school (i.e., tuition payer code equal to 1 or FTE greater than 0).
2. Student has a test record from the 2018-2019 school-year.
3. Student also has a test record from the 2017-2018 school-year in the same subject.
4. Each student test record assesses consecutive grades (i.e., 2018 Grade 4 ELA & 2019 Grade 5 ELA, etc.) for grades 4-8 and ELA End-Of-Course (EOC) tests. Math EOC SGP and SGT were modeled if there were more than 2000 test records sharing the same growth trajectory in the three years from 2017 to 2019, which include those accelerating students who took Algebra I right after they took the math test for grade 7 in the prior year. Students in grade 3 will not have a growth score as they do not have two consecutive test records.

Only FAY students contribute student growth percentile and student growth target data to the school's growth score calculation for accountability purposes.

Only test records which can be matched to a valid student enrollment are included in the accountability system. Test records with unverifiable information such as missing AzEDS ID numbers are excluded. To build the growth model, the ADE includes test records from students considered non-FAY at the time of testing. The growth model restricts the academic peer groups as much as possible to only students who are receiving a public education from an Arizona school that teaches grade level standards.

Timeline & Appeals

The following is the timeline for Fiscal Year 2019 A-F school letter grades:

- October 31, 2019: A-F Letter Grades were published on the State Board of Education's website: <https://azsbe.az.gov/f-school-letter-grades>.
- November 1 – November 15, 2019: Appeals window was open. The Appeals Policy and Procedures can be found on the State Board of Education's website: <https://azsbe.az.gov/sites/default/files/media/A-F%20Appeals%20Policies%20and%20Procedures%20-%20FINAL%20with%20Appeal%20Form%20Reference.pdf>.
- November 18, 2019: Schools that filed an appeal were be labeled as "UR" "Under Review". Schools that were subject to 3 consecutive D Statute were be labeled as an F unless an appeal was filed.
- December 9 – December 11, 2019: State Board of Education's A-F Appeals Committee meet and made recommendations.
- December 13, 2019: State Board of Education approved, rejected or modified the A-F Letter Grade Appeals decisions recommended by the A-F Appeals Committee. An updated A-F Letter Grade file was be posted on the State Board's website: <https://azsbe.az.gov/f-school-letter-grades>.

Appeals:

The State Board of Education's A-F Appeals Committee evaluated appeals to preliminary letter grades based on the following: 1) environmental issues or events; 2) adverse testing conditions; 3) a school or community emergency; 4) a school tragedy; or 5) Incorrect Data. Please note: review the Policies and Procedures regarding appeals citing incorrect data on the State Board's website: <https://azsbe.az.gov/sites/default/files/media/A-F%20Appeals%20Policies%20and%20Procedures%20-%20FINAL%20with%20Appeal%20Form%20Reference.pdf>

Schools could request either an expedited appeal (document only review) or a non-expedited appeal (document review and appearance before the Committee). The Committee consisted of three members of the Board who evaluated each qualified appeal and submitted a recommendation to the full Board based on the appeals rubric. A school's letter grade was not be published during the appeal, a note indicating that the awarded letter grade was under review was included. For appeals that were approved by the State Board, the Committee's recommendation was used in the final letter grade. For appeals that were denied, the original finalized data determined the school's letter grade.

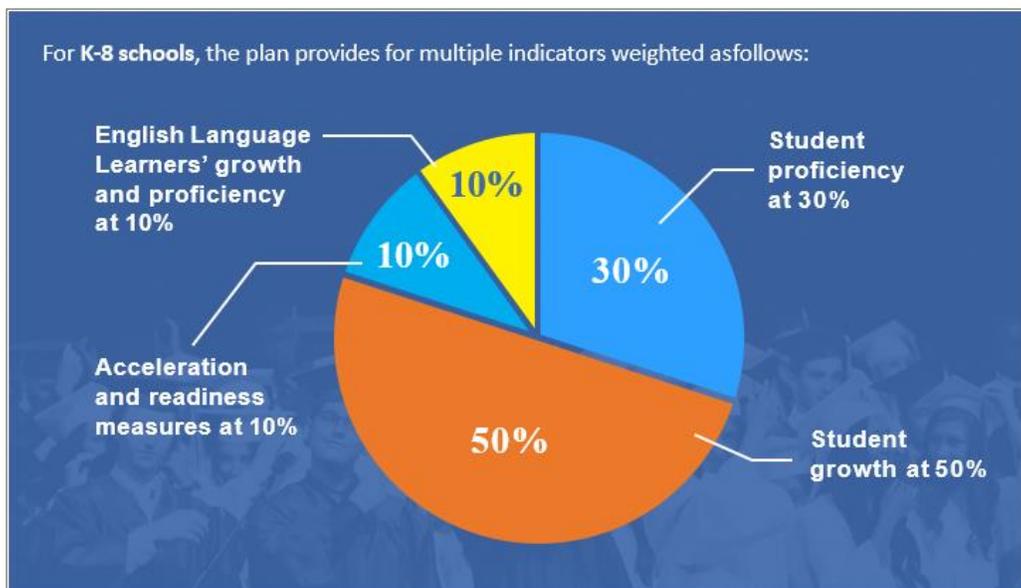
Cut Scores

- K-8 Letter Grade model is used for schools that serve grades Kindergarten through 8 (or any configuration within that such as K-7, 1-6, 6-8, etc.). K-8 schools eligible for 80 or more of the 100 total points available will receive a letter grade
- Due to the fact that schools can earn a different amount of points, cut scores for letter grades for all models were established on percentages. Percentage Earned = Total Points Earned (excluding bonus points) / Total Points Eligible. Cut scores for Fiscal Year 2019 remained the same as in Fiscal Year 2018 per State Board approval.

A	B	C	D	F
100-84.67%	84.66-72.39%	72.38-60.11%	60.1-47.83%	47.82-0% ^{viii}

Pursuant to A.R.S. § 15-241.02(D), schools that receive three consecutive D's "shall be assigned a letter grade of F unless an alternate letter grade is assigned after an appeal...". Schools receiving a third "D" letter grade were assigned a "D" in the initial release of A-F Letter Grades. If the school did not file an appeal of their grade, it was be changed to an F following the close of the A-F Letter Grade Appeal window.^{ix}

K-8 model:



2019 A-F Traditional School Letter Grade Models

The K-8 A-F Letter Grade model aims to fairly and accurately depict a school's accountability determination in a manner which complies with state statute, State Board Rule, as well as other accountability requirements.

Schools that serve grades K-8 or any combination within (e.g., K-8, K-7, 1-5, 6-8, K-5, etc.) will be evaluated on the K-8 model. Non-Typical school configurations, those that serve grades K-12, 1-12, 2-12, 6-12, etc., are graded on both the K-8 and 9-12 models. Approved Alternative schools will be graded on the Alternative School Model. Small schools, fewer than 10 FAY students, Arizona Online Instruction (AOI) schools, or schools not eligible for enough of the total 100 points (80 for K-8) will be Not Rated in Fiscal Year 2019.

N-Size

The K-8 traditional school model requires schools to have 10 FAY students in each indicator to be eligible to earn the points. Exceptions to this rule are:

- K-8 Acceleration/Readiness grades 5-8 EOC does not require an N-Size of 10
- K-8 Acceleration/Readiness Chronic Absenteeism requires an N-Size of 10 students including FAY and non-FAY
- Special Education enrollment bonus points do not require N-Size of 10
- Science Proficiency bonus points do not require N-Size of 10

Schools that do not meet the minimum N-Size of 10 FAY students cannot earn points for that indicator.

RAEL

Recently Arrived English Learner (RAEL) students in year 1 and year 2^x students are excluded from proficiency calculations for ELA only.

K-8 Model

Weight	Indicators
30%	Proficiency, Statewide Assessment
50%	Growth, Statewide Assessment
10%	Proficiency and Growth, English Learners
10%	Acceleration / Readiness Measures

The K-8 model is based on a scale of 0-100 points for schools that have all available indicators; the scale is adjusted for those indicators that do not meet the N-Size. Indicators must have a minimum of 10 FAY students to count, excluding components in the Acceleration/Readiness indicator, special education enrollment bonus points and science proficiency bonus points. All indicators are capped at the total percent possible.

The following school configurations are graded on the K-8 model:

- K-8
- Configurations within K-8
 - K-5
 - K-6
 - K-7
 - 6-8
 - 5-8
 - 1-4
 - Etc.

Proficiency

Proficiency results are worth 30% of a K-8 school's letter grade. The 2019 AzMERIT or MSAA ELA and Math scores are utilized for grades 3-8 FAY students. Schools must have a minimum of 10 FAY students to be eligible for points. If a student took the same assessment twice, the higher score is utilized. For grades 5-8 students who took HS EOC ELA or Math and the grade-level assessment, the HS EOC assessment will be utilized for proficiency calculations. Additionally, if grades 5-8 students took the HS EOC ELA or Math at the high school, both the high school and the elementary school in which that student is enrolled receive the credit, assuming the student is FAY at both schools. Invalid test records count as not tested. Proficiency points are capped at 30. The achievement levels are weighted such that students scoring highly proficient earn the most points (see below).

Achievement Level	Point Value
Minimally Proficient	0
Partially Proficient	0.6
Proficient	1.0
Highly Proficient	1.3

K-8 proficiency is calculated two ways: using a stability model and then all FAY students (1-, 2-, and 3-year). The higher of the two proficiency point totals will be used for letter grade calculations.

Stability model: This model weights student scores higher for students that have been at the same school for multiple years, and where the school has had the greatest opportunity to have the most impact, (see Table below for more detail). Schools that only have one or two years of proficiency will be weighted accordingly. Schools must have a minimum of 10 FAY students for each year. If the minimum is not met, those students are added to the next year. For example, if a school has eight 3-year FAY students, thirteen 2-year FAY, and twenty 1-year FAY students the 3-year and 2-year FAY group is merged as the minimum is not met for the 3-year. This would give the school twenty-one 2-year FAY students and twenty 1-year FAY.

Years of Data	Max Proficiency Weights		
	3 years of FAY	2 Years of FAY	1 Year of FAY
3 Years	15	10	5
2 Years (Example: only serves Grade 7-8)		18	12
1 Year (Example: School created two years ago)			30

The percent proficient for each year of FAY for which a school is eligible is then weighted accordingly using the table above to determine points earned.

All FAY students: This model weights all FAY (1-,2-, and 3-year) students equally.

Percent Tested

Proficiency calculations are impacted by percent tested. Schools that do not meet the 95% test threshold mandated by law are negatively impacted on the proficiency calculation.

The formula used is to calculate percent tested:

$$\text{Grades 3 – 8 \% Tested} = 100 \left[\frac{0.5 (\text{No. of students tested in ELA} + \text{No. of Students Tested in Math})}{(\text{No. of students enrolled in grades 3 – 8 on the first day of the AzMERIT State Testing Window})} \right]$$

In Fiscal Year 2019, the first day of the AzMERIT State Testing Window was April 1, 2019.^{xi}

Percent Proficient for Schools that Meet 95% Tested

$$\begin{aligned} & \% \textit{ Proficient for Schools Meeting 95\% Tested} \\ & = 100 \left(\frac{\left[\begin{aligned} & ((\textit{No. of FAY students PP on AzMERIT or MSAA ELA} + \textit{No. of FAY students PP on AzMERIT or MSAA Math})0.6) \\ & + ((\textit{No. of FAY students P on AzMERIT or MSAA ELA} + \textit{No. of FAY students P on AzMERIT or MSAA Math})1.0) \\ & + ((\textit{No. of FAY students HP on AzMERIT or MSAA ELA} + \textit{No. of FAY students HP on AzMERIT or MSAA Math})1.3) \end{aligned} \right]}{\textit{No. of FAY students tested on AzMERIT or MSAA ELA} + \textit{No. of FAY students tested on AzMERIT or MSAA Math}} \right) \end{aligned}$$

Schools that do not meet 95% tested will see an increase in the denominator of their proficiency calculation. The total number of students added to the denominator (and thereby included in the numerator as 0) equals the number of students needed to meet the 95% test threshold.

Example: A school was supposed to test 100 students. They tested 92. The school needed to test 95 students to meet or exceed the 95% test threshold. Because they did not meet the threshold we do the following:

- Number of students needing to test to meet 95% – number of students actually tested

The number generated from the above subtraction is then added to the proficiency calculation denominator (see formula below).

Percent Proficient for Schools that DO NOT Meet 95% Tested

$$\begin{aligned} & \% \textit{ Proficient for Schools DO NOT Meet 95\% Tested} \\ & = 100 \left(\frac{\left[\begin{aligned} & (\textit{No. of FAY students PP on AzMERIT or MSAA ELA} + \textit{No. of FAY students PP on AzMERIT or MSAA Math})0.6) \\ & + (\textit{No. of FAY students P on AzMERIT or MSAA ELA} + \textit{No. of FAY students P on AzMERIT or MSAA Math})1.0) \\ & + (\textit{No. of FAY students HP on AzMERIT or MSAA ELA} + \textit{No. of FAY students HP on AzMERIT or MSAA Math})1.3) \end{aligned} \right]}{\begin{aligned} & (\textit{No. of FAY students tested on AzMERIT or MSAA ELA} + \textit{No. of FAY students tested on AzMERIT or MSAA Math}) \\ & + (\textit{No. of Students needed to Meet 95\% tested}) \end{aligned}} \right) \end{aligned}$$

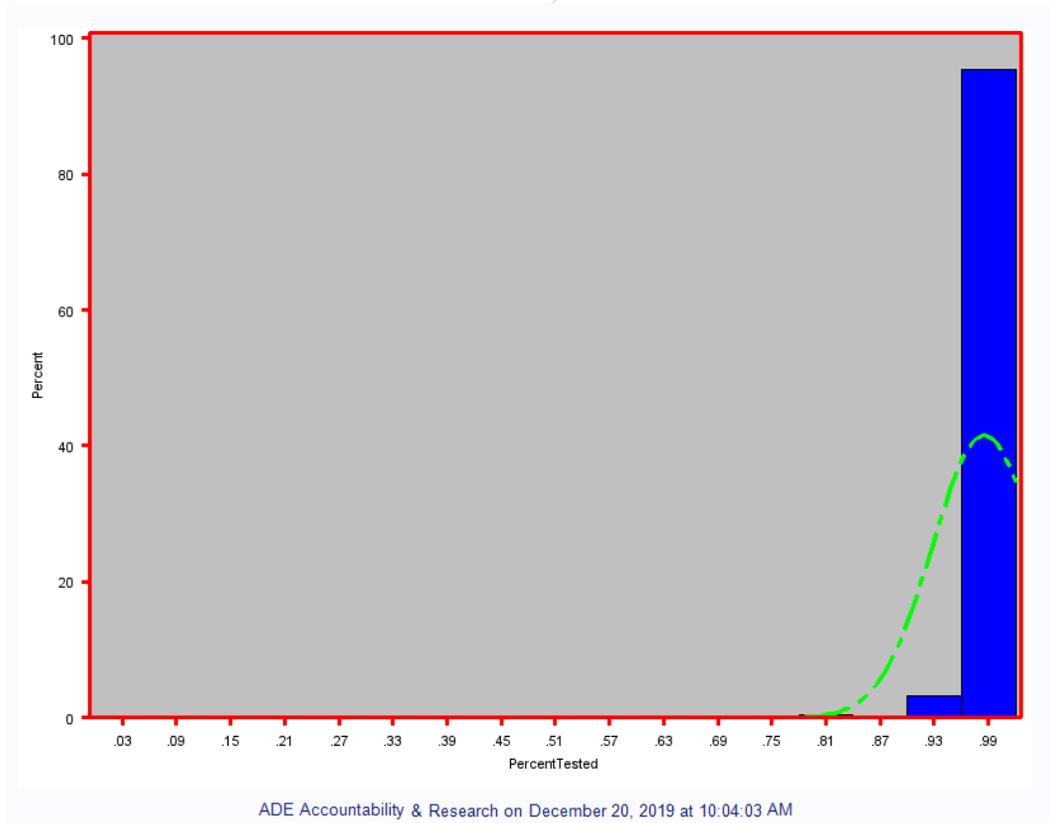
Statistics and Graphs for 95% Tested and Proficiency

For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (see pages 48-49)

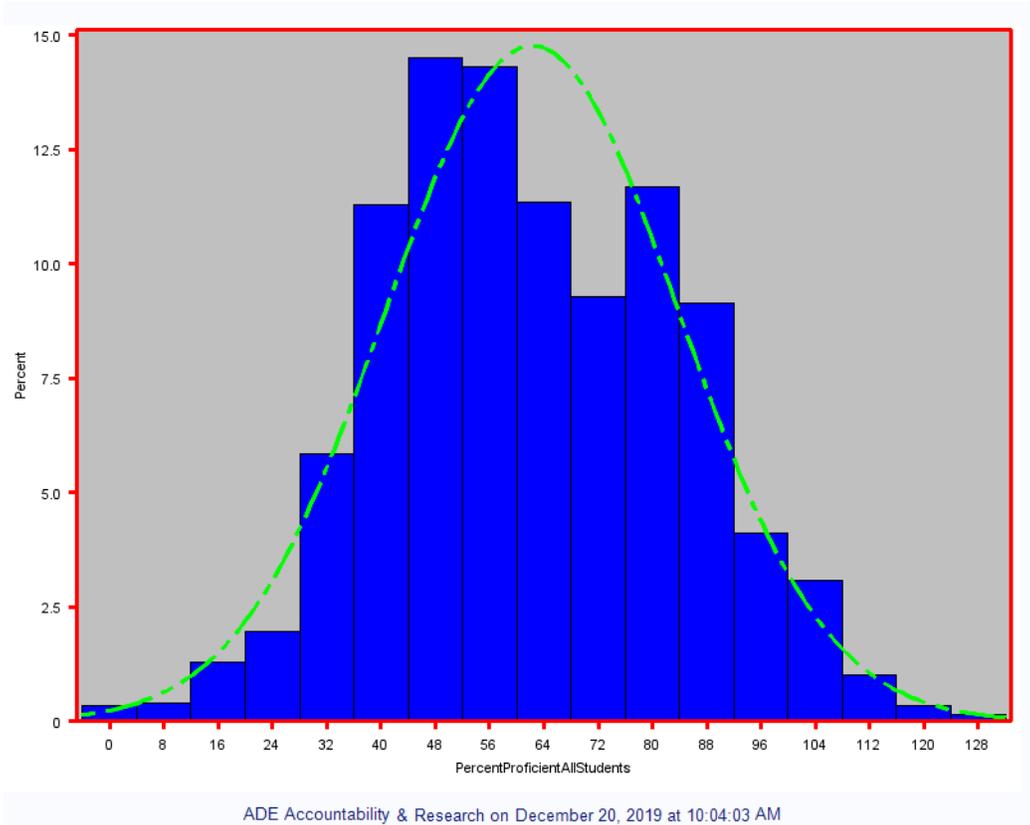
	PercentTested	PercentProficientAllStudents	profpoints
Max	1.00	128.00	30.00
Mean	0.99	62.26	18.58
Min	0.00	0.00	0.00
Range	1.00	128.00	30.00
StdDev	0.06	21.62	6.28
StdErr	0.00	0.56	0.16
Var	0.00	467.44	39.48
Median	0.99	60.00	18.00
Q1	0.99	46.11	13.83
Q3	1.00	78.86	23.66
P1	0.80	15.77	4.73
P5	0.96	29.78	8.93
P10	0.98	36.09	10.83
P90	1.00	90.58	27.17
P95	1.00	98.68	29.61
P99	1.00	111.28	30.00

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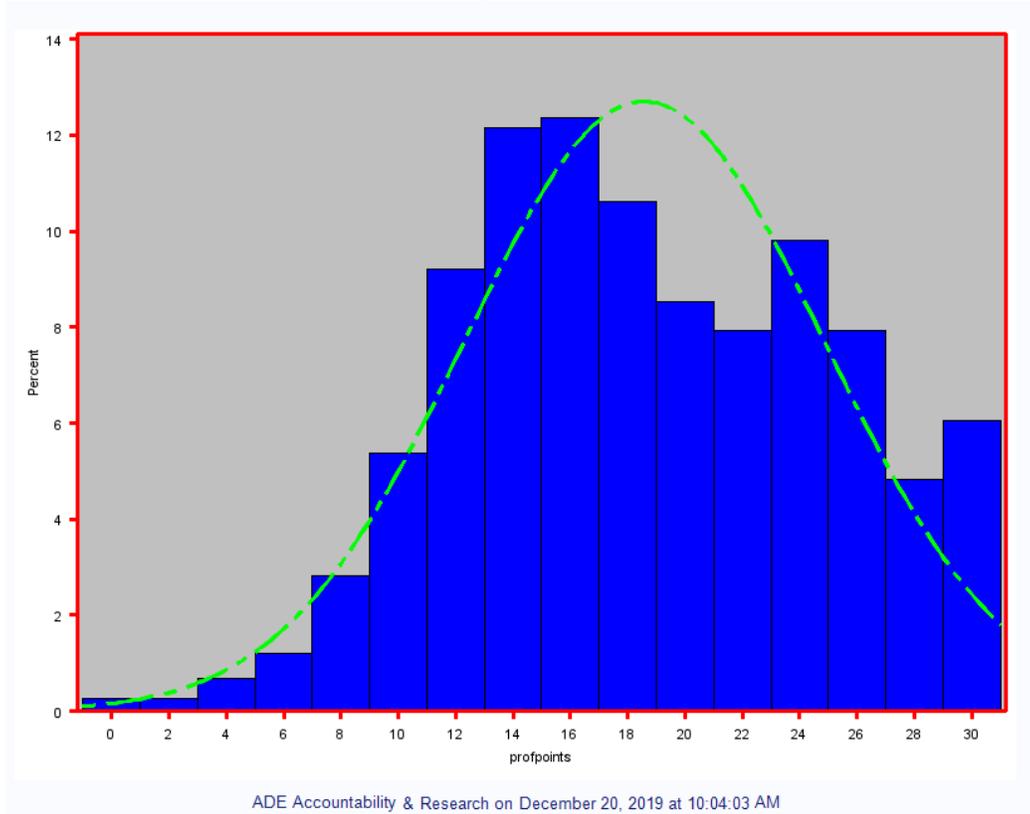
Percent Tested



Percent Proficient All Students



Proficiency Points



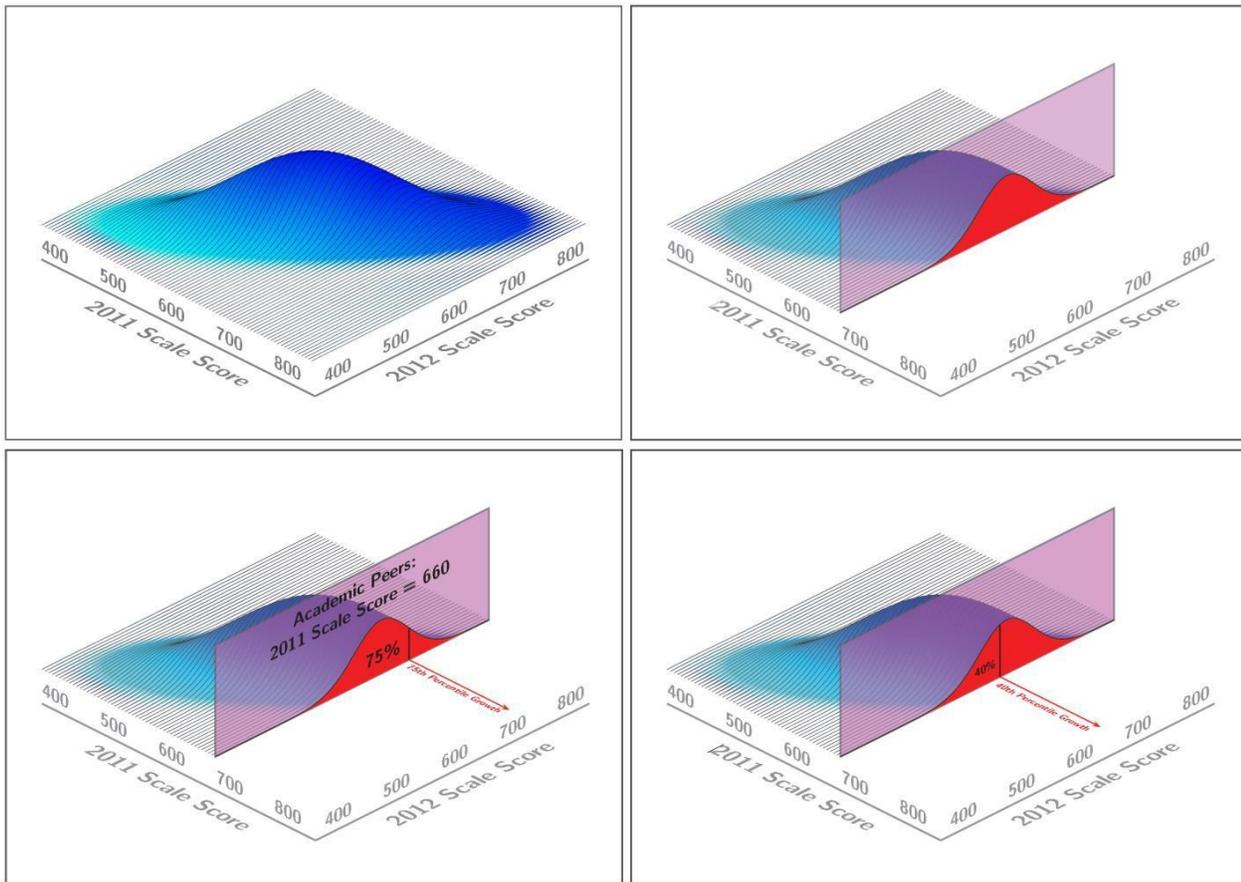
Growth Model

The purpose of the growth indicator is to recognize the academic growth a student has made in the past year, even if he/she has not yet reached grade-level proficiency. State statute mandates that the selected growth model measures even the lowest achieving students and the extent to which they grow academically from one year to the next.

Growth results are worth 50% of a K-8 school's letter grade. Schools must have a minimum of 10 FAY students with an SGP and SGT in each subject, ELA and Math, to be eligible for growth points. Thus, SGP for ELA is worth 12.5%, SGP for Math is worth 12.5%, SGT for ELA is worth 12.5%, and SGT for Math is worth 12.5%. Math growth points (SGP + SGT) are capped at 25 and ELA points (SGP + SGT) are capped at 25, thus making growth points capped at 50.

Student Growth Percentile (SGP)

An SGP describes how a "typical" student's current-year test score is compared with the current-year test scores of those students with the exact same prior test scores—his/her academic peers. In this sense, an SGP is a "norm-referenced quantification" (Betebenner, 2011, p. 3) of student academic growth. Comparison with academic peers is accomplished by employing quantile regression that relates the prior scores of each grade by subject cohort with their current-year scores. Each student is compared to his/her actual and conceptual academic peers. An SGP of 40 means that the student grew more than 40% of his/her academic peers in a year. In the event a student is without actual academic peers based on their individual data, the individual student is compared to his/her "conceptual" academic peers only. The use of this particular type of normed growth measure ensures that very low and/or high performing students can receive high growth scores relative to their peers with the same academic achievement history. The growth model includes only academic achievement data; Arizona's growth model does not control for student demographic information or subgroup membership.

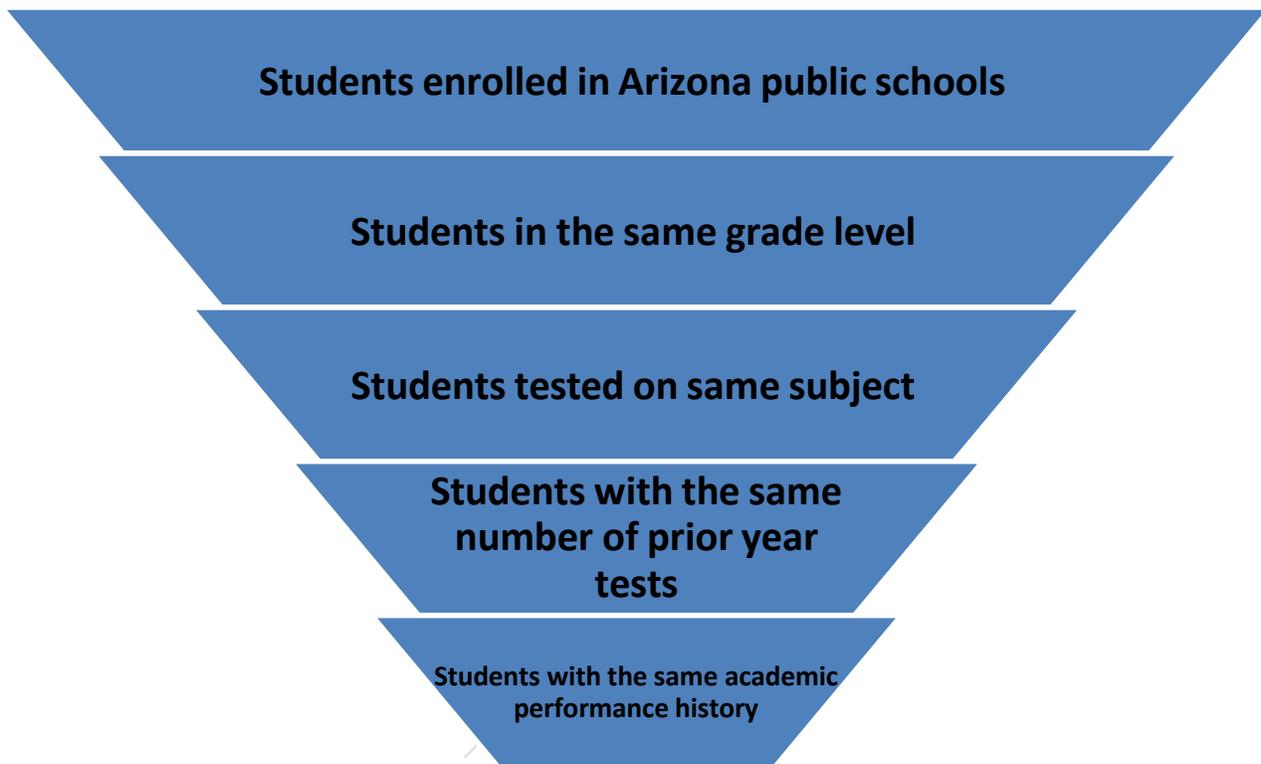


Conceptual illustration of the current year growth percentile based on prior and current year test performance (Betebenner, 2011)

In 2019, the AZMERIT Grade 3-8 scale scores from 2017 to 2019 will be used to calculate growth for Grades 4-8. Grade 3 is the first grade Arizona students are given a statewide standardized assessment; therefore; Grade 4 is the first possible opportunity to assess growth for a student. Students must have scores for 2018 and 2019 and for two consecutive grade levels to receive an SGP.

The growth of all FAY students based on prior year scores comprises the school's growth calculations. Every FAY student for whom a student growth percentile (SGP) can be determined is considered in the growth of all students at a school. Students who retake the same grade level AzMERIT assessment for two consecutive years are not assigned a growth score. The growth model does not compute an SGP for any student who is missing a prior year assessment (AzMERIT) even if a student has other test history; an assessment for the year prior is required.

When available, up to three years of test history were used in the determination of a student's current year SGP. The number of years was reduced from five years after considerable research indicated diminished returns by including more than three years and more than two assessment types. If the student assesses anywhere in the state using their unique AzEDS identification number, these assessments can be linked longitudinally regardless of a new school of attendance. The growth model begins with all Arizona public school students, but academic peer groups are refined based on grade level, subject, and test history. Test history refers to the number of tests or data points available for each student as well as a comparison of scale scores – not performance levels.



To receive an SGP in English Language Arts, a student must take the test appropriate for the grade in which he/she is enrolled. For example, a student in Grade 5 must take the ELA Grade 5 test to receive an SGP. For Mathematics, a student in Grades 3-7 must take the test appropriate for the grade he/she was enrolled in. A student in Grade 8 could take either the Mathematics Grade 8 test or any of the high school end-of-course tests or both; if the student has a grade-level assessment and a high school end-of-course test both tests are counted. A student in high school must take any of the high school end-of-course tests to receive an SGP. Students who take the same test for two consecutive years are not assigned an SGP.

Only the SGPs of FAY students contribute to the school’s growth score. A categorical evaluation of school growth is used to obtain the growth score of all students in a school. To do this, the SGPs of FAY students are classified into three levels ranging from low to high:

L= Low (SGP 1-33)
A= Average (SGP 34-66)
H= High (SGP 67-99)

Then the percentage of students at the school level, using all grades, is calculated separately for each subject (English Language Arts and Mathematics) and for each of the categorical growth bands defined by the students’ prior-year achievement level and current-year SGP growth level. The percentages are then weighted differently in the following ways:

Current-Year Student Growth Percentile			
Prior-Year Achievement Level	Weights		
Highly Proficient (HP)	0	1.00	1.00
Proficient (P)	0	1.00	1.20
Partially Proficient (PP)	0	1.00	1.80
Minimally Proficient (MP)	0	1.00	2.00
	1-33	34-66	67-99
	Low Growth	Average Growth	High Growth

The formula for the overall score of a school for each subject is:

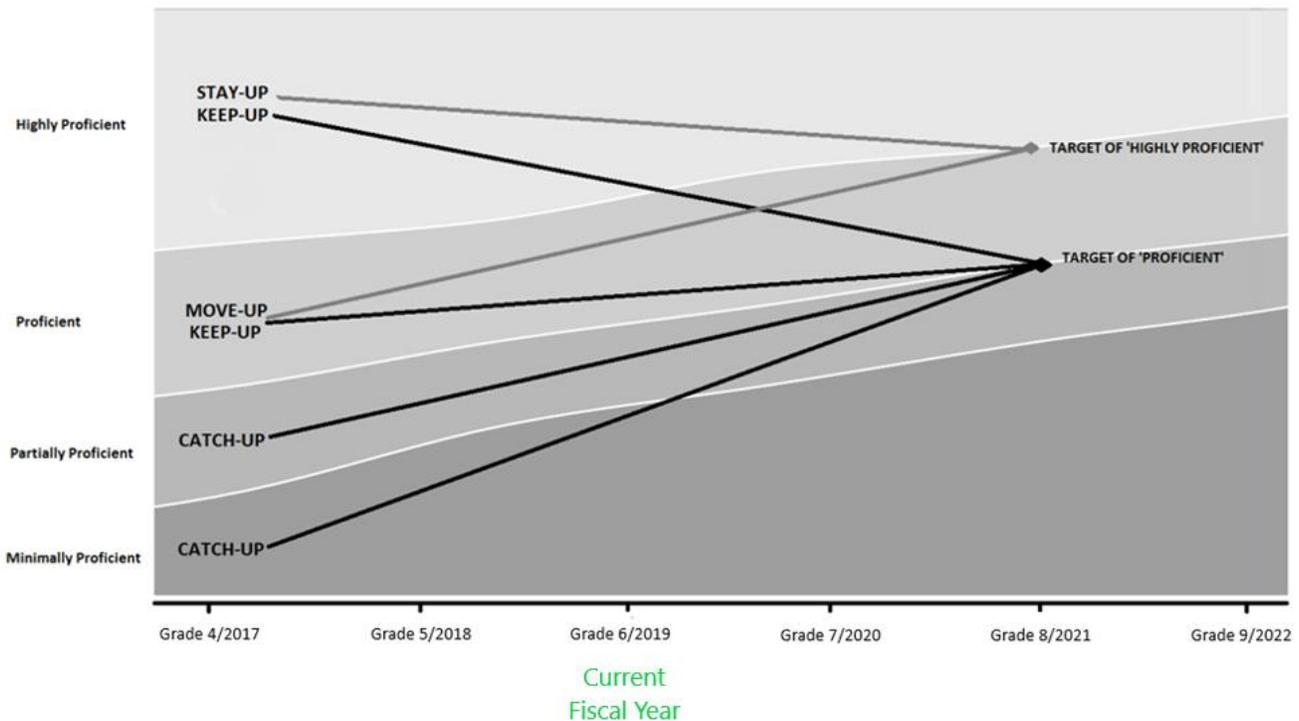
$$\text{The SGP points of a school for each subject} = \left(\begin{array}{l}
 (\% \text{ of PY MP FAY students who made high growth } \times 2.00) \\
 + (\% \text{ of PY PP FAY students who made high growth } \times 1.80) \\
 + (\% \text{ of PY P FAY students who made high growth } \times 1.20) \\
 + (\% \text{ of PY HP FAY who made high growth } \times 1.00) \\
 + (\% \text{ of PY (MP + PP + P + HP) who made average growth})
 \end{array} \right)$$

SGT

Although the student growth percentile is a useful tool for summarizing where a student stands compared to their academic peers, no appeal is made to how much growth they must demonstrate in relation to a standard of achievement. A student's performance on the AzMERIT is categorically represented by one of the following: minimally proficient, partially proficient, proficient, and highly proficient. A few key questions then arise about a student's growth given their performance status:

- 1) Is the growth demonstrated by the student sufficient for them to be on track towards proficiency in the future if they are currently non-proficient?
- 2) Is the growth demonstrated by the student sufficient for them to remain proficient in the future if they are currently proficient?
- 3) Is the growth demonstrated by the student sufficient for them to be on track towards being highly proficient in the future if they are currently proficient?
- 4) Is the growth demonstrated by the student sufficient for them to remain highly proficient in the future if they are currently highly proficient?

To answer these questions, we compare a student's growth percentile with their growth target. A student growth target (SGT) is the minimum growth a student ought to exhibit in the year to achieve a future target. A SGT is determined by a pre-established future achievement target, a time-frame to reach the target, and the performance level of the student in the prior year. The graphic below displays how the SGTs are determined.



There are two pre-established targets: ‘Proficient’ and ‘Highly Proficient’. The time frame to reach the targets is determined arbitrarily as within (or across) the next three years beyond the current year or by high school graduation, whichever comes first. The four categorical performance levels are shown on the vertical axis, and the grades/years are shown along the horizontal axis.

Students who were at the ‘Minimally Proficient’ performance level and the ‘Partially Proficient’ performance level in the prior year are labeled as ‘Catch-Up’ students. Among these non-proficient students, it is of key importance for them to catch up with the ‘Proficient’ target. Their SGTs are therefore the minimum growth they need demonstrate from the prior year to the current year to be on track to reach the target of ‘Proficient’ within the next three years. In other words, SGT is the level of difficulty of reaching a target of proficiency represented in a percentile.

Students who fell into the ‘Proficient’ or ‘Highly Proficient’ performance levels in the prior year are labeled as “Keep-Up” students and their first SGT is the minimum growth they need to demonstrate from the prior year to the current year to remain above the target of ‘Proficient’ across the next three years. Students who were proficient in the prior year are also subject to the second target of ‘Highly Proficient’. For the students who were currently proficient, the second SGT is the minimum growth they need to demonstrate to move up to the ‘Highly Proficient’ level within the next three years. They are also labeled as “Move-Up” students. For the students who were currently highly proficient, the second SGT is the minimum growth they should demonstrate to remain at the highest performance level across the next three years. They are also labeled as “Stay-Up” students.

For SGT calculations detailed below, all students were held to a proficient target (i.e., ‘Catch-Up’ or ‘Keep-Up’).

To know if a student met his/her target, we must compare the student’s actual growth (SGP) to the student’s target (SGT). Generally speaking, a student is deemed as on-track to reach the target in the time frame if his SGP is equal to or greater than his SGT. In contrast, a student is deemed as not being on-track if his SGP is less than his SGT. For the A-F calculations, three categories (see table below) were created by comparing SGP to SGT as opposed to the two just noted to allow students more opportunities for growth points. Students who surpassed their target by more than 10 percentile points were categorized as “exceeds target.” For example, if a student had an SGP of 70 and an SGT of 50 this student grew 20 percentile points more than was needed in the current year to be on track to proficiency. Students can also be categorized as “exceeds target” if their SGP and their SGT scores are greater than or equal to 89. Students within plus or minus 10 percentile points were categorized as “at or near target” (e.g., an SGP of 35 with an SGT of 45, an SGP of 35 with an SGT of 25, etc.). Students who were below their target by more than 10 percentile points were categorized as “below target” (e.g., an SGP of 50 with an SGT of 62).

SGP is less than SGT by more than 10 percentile points	Below Target
SGP is within + or – 10 percentile points of SGT	At or Near Target
SGP is greater than SGT by more than 10 percentile points OR SGP and SGT are greater than or equal to 89	Exceeds Target

To evaluate a school’s status in keeping its students on track towards being proficient, the state utilizes only four of the six student growth targets outlined above, the SGT (or the sufficient growth) for minimally proficient students to be on track to proficiency, the SGT (or the sufficient growth) for partially proficient students to be on track to proficiency, the SGT (or the sufficient growth) for proficient students to be on track to remain proficient, the SGT (or the sufficient growth) for highly proficient students to be on track to remain proficient. The percentage of FAY students in each category is calculated at the school level across all grades but separately for each subject (English Language Arts and Mathematics). These percentages are weighted differently in the following ways:

Current-Year Student Growth Target			
Prior-Year Achievement Level	Weights		
Highly Proficient (HP)	0	1.00	1.00
Proficient (P)	0	1.00	1.20
Partially Proficient (PP)	0	1.00	1.80
Minimally Proficient (MP)	0	1.00	2.00
	<10 percentile points of target	+/- 10 percentile points of target	>10 percentile points of target
	Below Target	At or Near Target	Exceeds Target

$$\text{The SGT points of a school for each subject} = \left(\begin{array}{l} (\% \text{ of PY MP FAY students in Exceeds Target } \times 2.00) \\ + (\% \text{ of PY PP FAY students in Exceeds Target } \times 1.80) \\ + (\% \text{ of PY P FAY students in Exceeds Target } \times 1.20) \\ + (\% \text{ of PYHP FAY in Exceeds Target } \times 1.00) \\ + (\% \text{ of PY (MP + PP + P + HP) in At or Near Target}) \end{array} \right)$$

xiii

$$\text{Total Growth Points} = 100(((0.125x(\text{SGP Math}) + 0.125x(\text{SGT Math})) + (0.125x(\text{SGT ELA}) + 0.125x(\text{SGP ELA}))))$$

$$\text{Total Growth Max Points} = (\text{Math max points } 25) + (\text{ELA max points } 25)$$

Statistics and Graphs for Growth

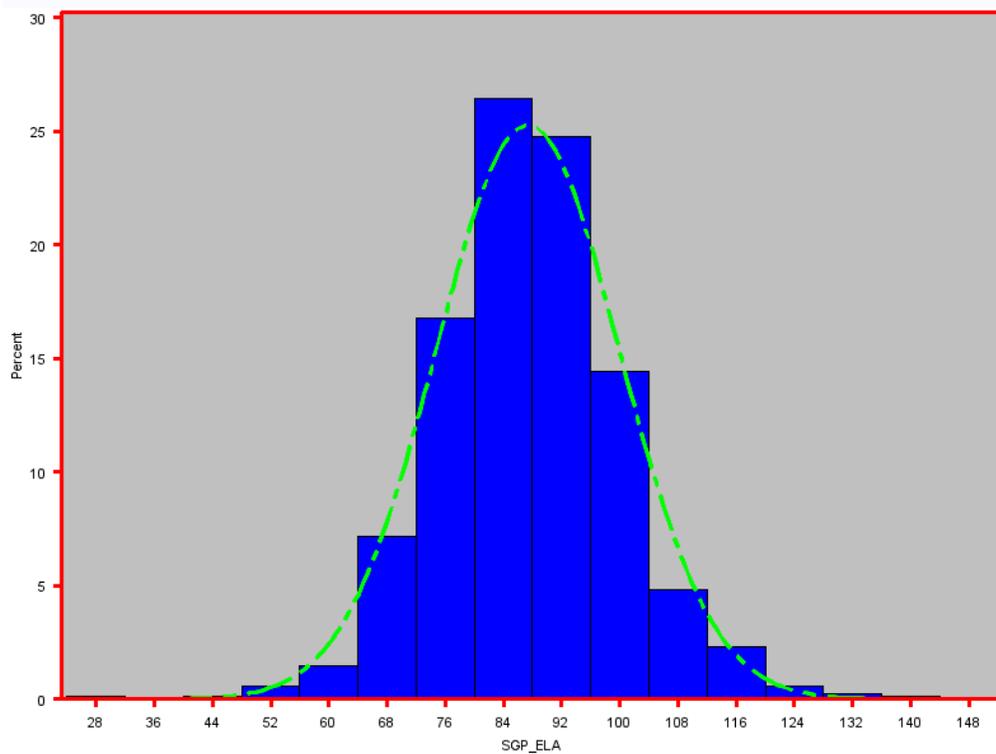
For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (see pages 48-49)

Summary Tables

	SGP_ELA	SGPELAPoints	SGT_ELA	SGTELAPoints	SGP_math	SGPMathPoints	SGT_math	SGTMathPoints	GrowthPoints_K8
Max	149.83	18.73	127.11	15.89	165.72	20.72	114.42	14.30	50.00
Mean	87.34	10.92	65.48	8.19	86.04	10.75	59.17	7.40	35.54
Min	28.33	3.54	3.33	0.42	7.14	0.89	0.00	0.00	0.00
Range	121.50	15.19	123.78	15.47	158.58	19.82	114.42	14.30	50.00
StdDev	12.64	1.58	17.64	2.21	17.44	2.18	19.90	2.49	9.84
StdErr	0.33	0.04	0.47	0.06	0.46	0.06	0.52	0.07	0.25
Var	159.67	2.49	311.17	4.86	304.33	4.76	395.84	6.19	96.88
Median	87.18	10.90	65.27	8.16	86.17	10.77	59.98	7.50	37.14
Q1	79.49	9.94	53.05	6.63	75.50	9.44	45.53	5.69	32.15
Q3	94.77	11.85	78.66	9.83	95.86	11.98	73.16	9.14	41.62
P1	56.37	7.05	23.83	2.98	45.25	5.66	10.00	1.25	0.00
P5	68.72	8.59	37.13	4.64	57.62	7.20	25.43	3.18	19.23
P10	72.26	9.03	42.50	5.31	65.00	8.13	32.47	4.06	26.29
P90	102.32	12.79	88.30	11.04	107.38	13.42	84.93	10.62	45.34
P95	108.70	13.59	93.05	11.63	114.56	14.32	91.06	11.38	47.17
P99	119.25	14.91	103.52	12.94	134.23	16.78	102.37	12.80	50.00

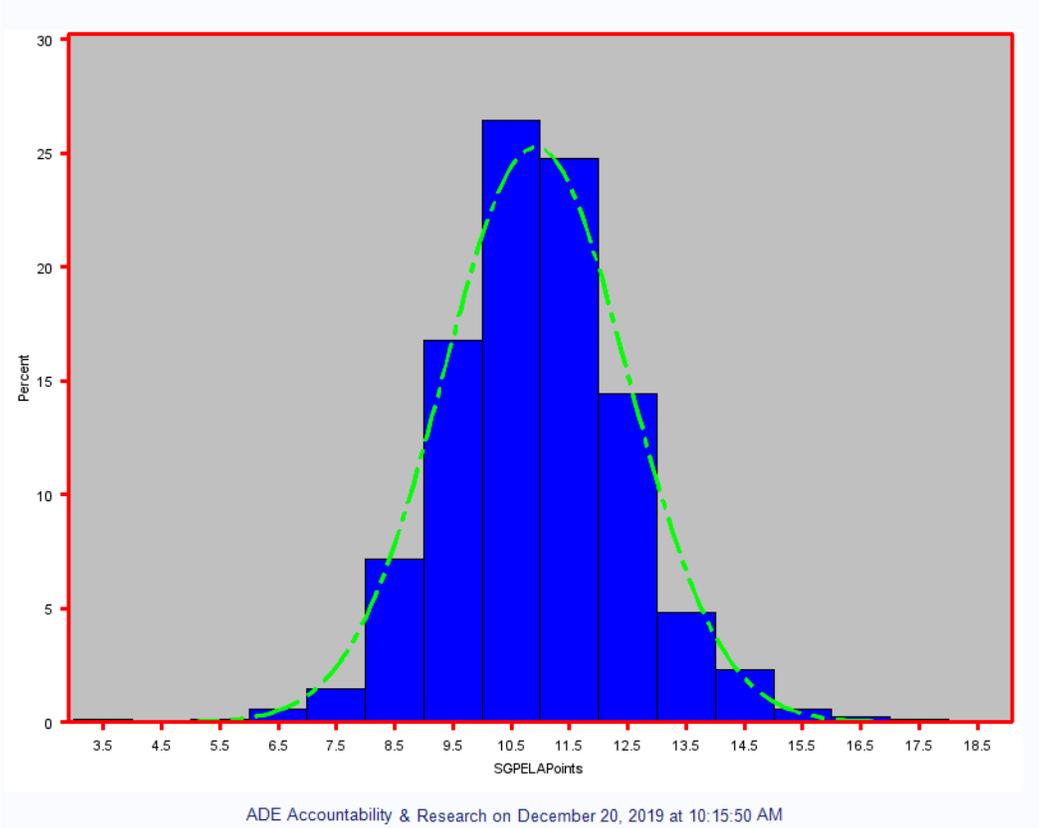
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Student Growth Percentile English Language Arts

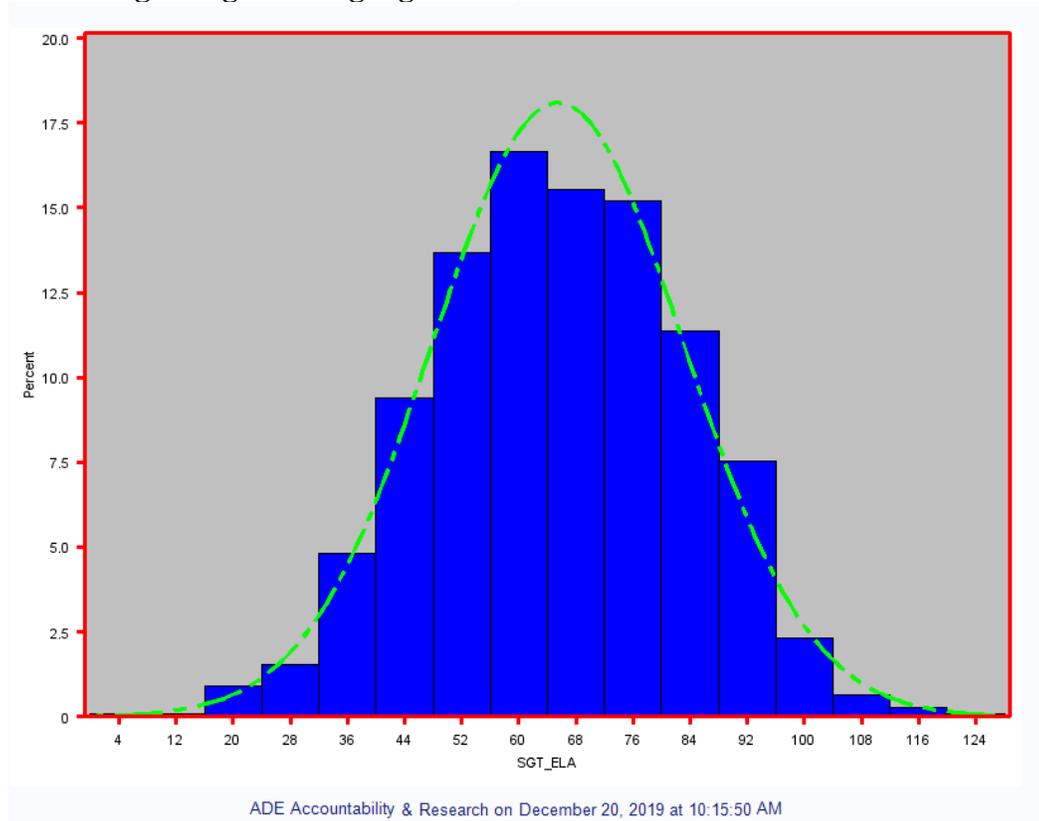


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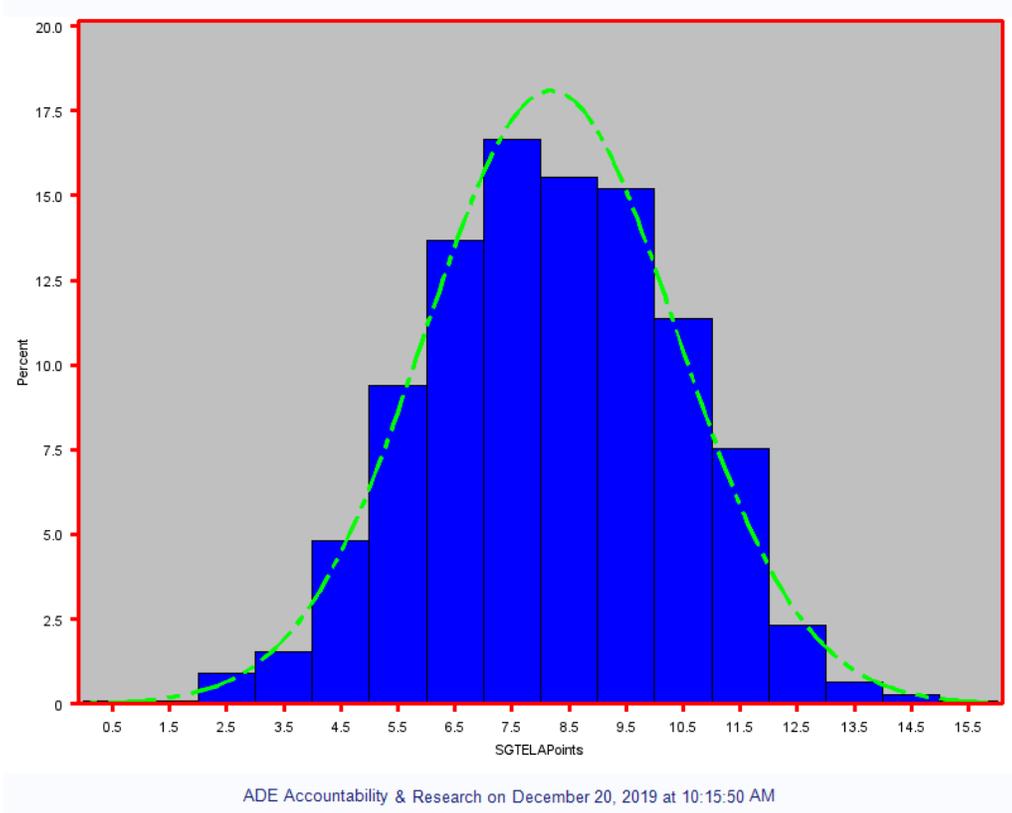
Student Growth Percentile English Language Arts Points



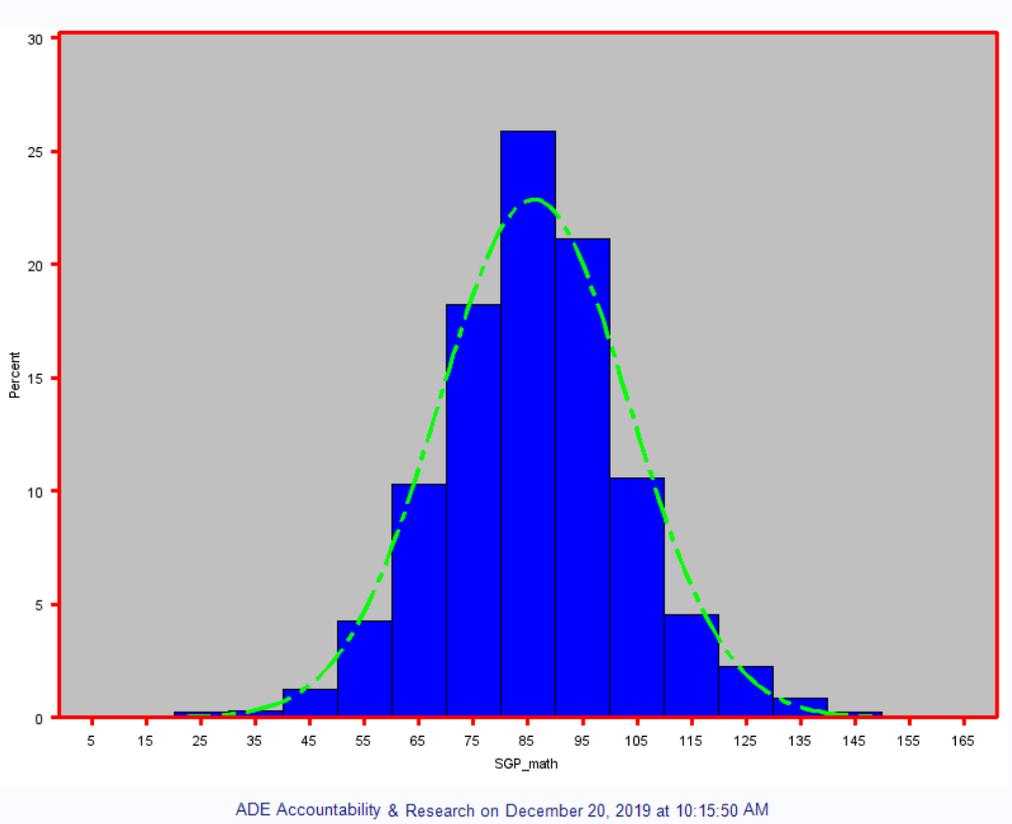
Student Growth Target English Language Arts



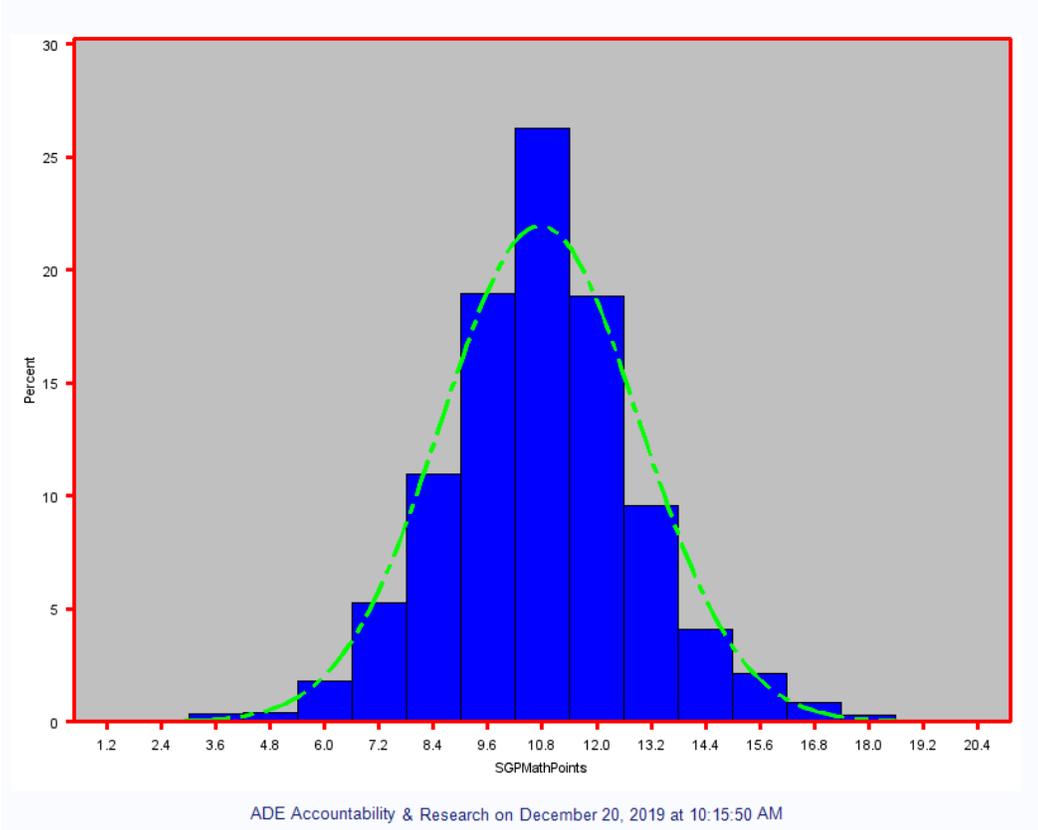
Student Growth Target English Language Arts Points Earned



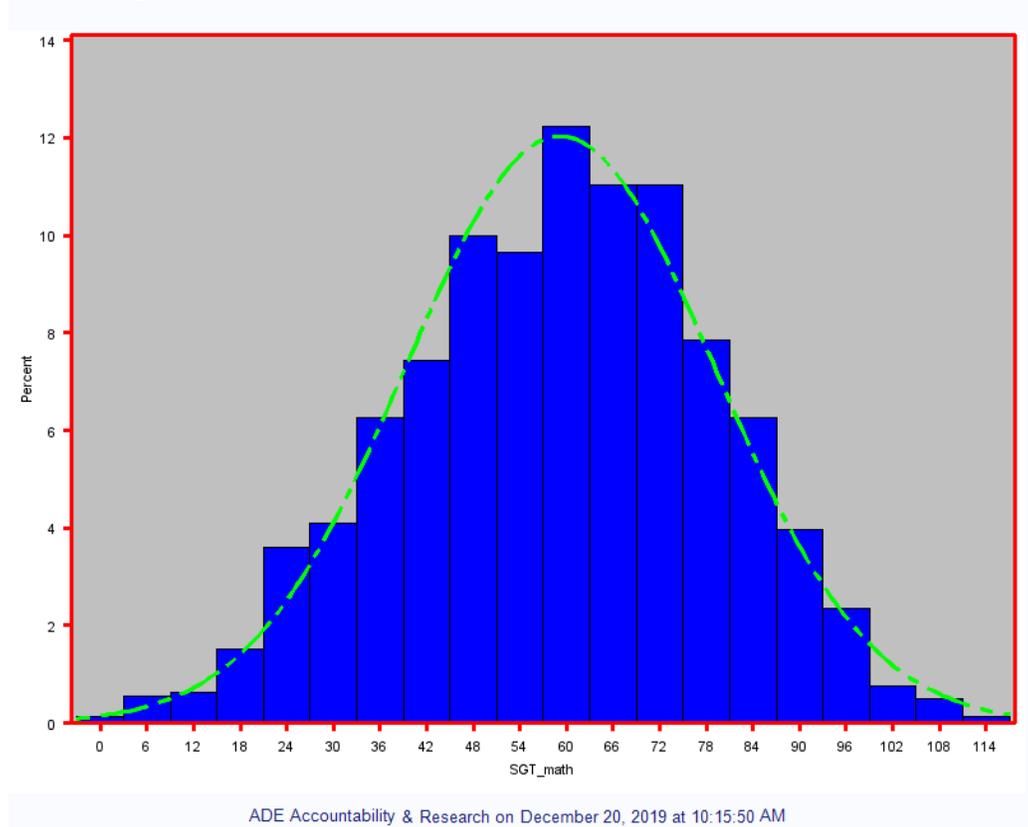
Student Growth Percentile Mathematics



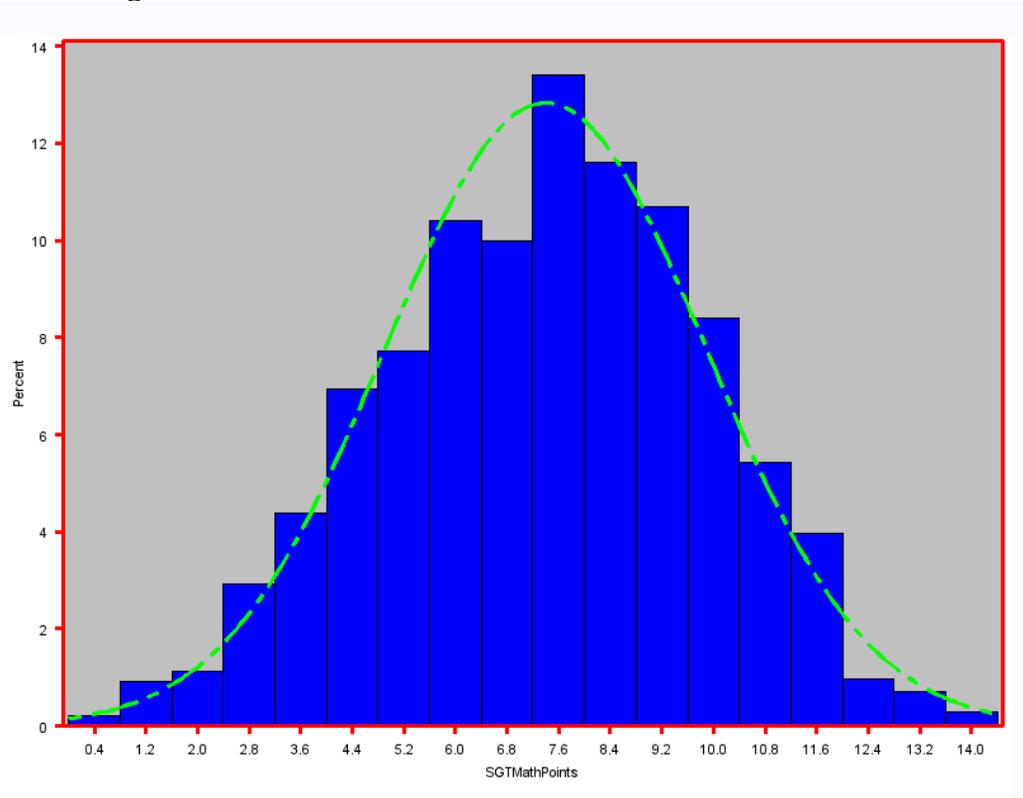
Student Growth Percentiles Mathematics Points Earned



Student Growth Target Mathematics

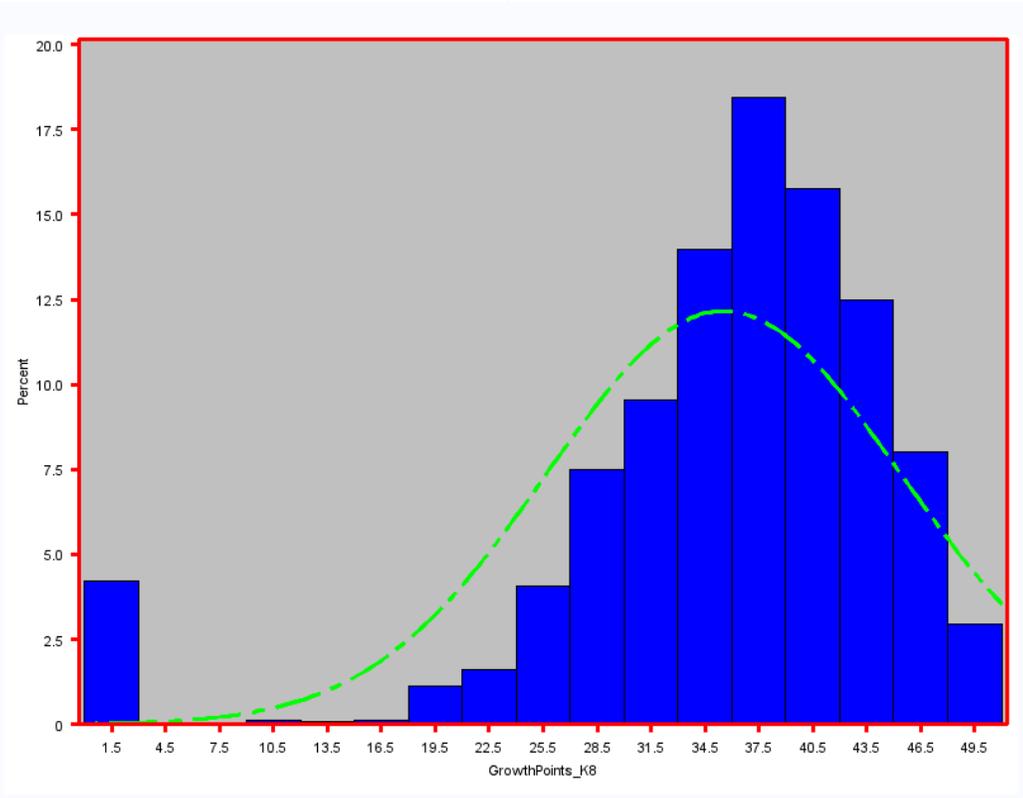


Student Growth Target Mathematics Points Earned



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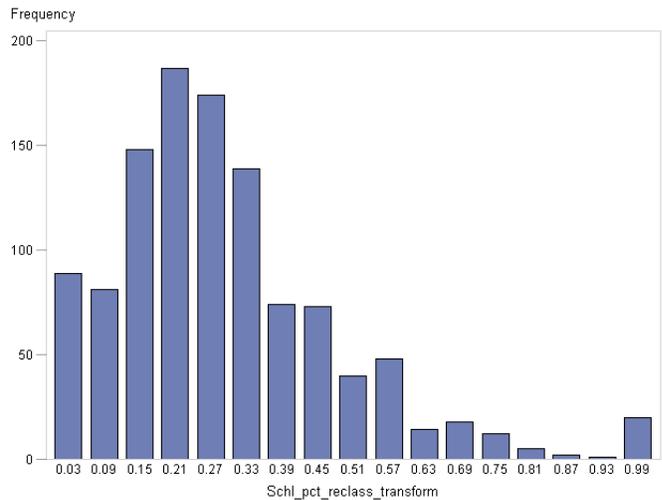
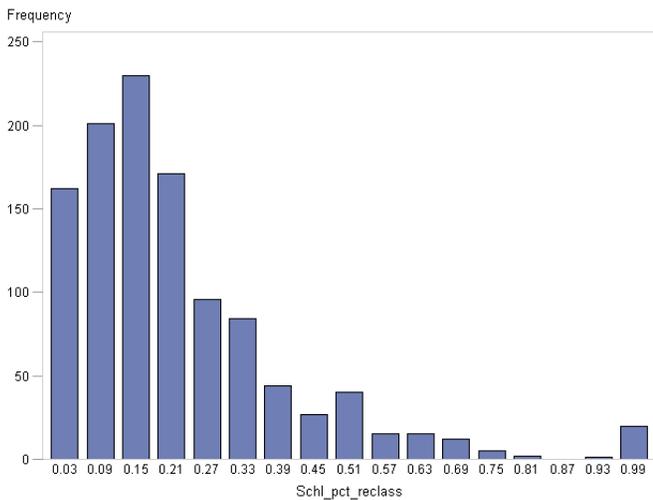
Total Growth Points



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Normalizing EL Data

- While ideally all data would be normally distributed, most data is not. Normally distributed data means when visualized through a histogram that data is bell-curve shaped. Further, the mean (average) and median (the midpoint of the data) of the data are approximately the same. When data does not have a normal distribution, this is called a non-normal distribution. When data has a non-normal distribution, data can be “transformed” to have a normal distribution. Below is an example of non-normally distributed data and the same data that has been transformed to have a normal distribution.
- Data transformation means applying the same mathematical operation to each piece of the original data. The transformation process changes every school and student in the same way. A variety of statistical methods are used for normalizing data based upon which approach provides a distribution as close as possible to normal.
- Once transformed, the relationship between data points does not change, but the relationship across data points does. Transformation modifies all the data, in the same way, to normalize the distribution as much as possible. Individual school or student performance is not damaged or improved during the transformation process.
- Data is normalized for two reasons. First, most statistical methods used to analyze data include an assumption of a normal distribution. For potential analysis to be as accurate as possible, data needs to have as close as possible to a normal distribution. Second, letter grade scores are a combination of several indicators. For the combined letter grade to be as accurate as possible, all data included in the grade calculation needs to approximately have a normal distribution.



EL Proficiency and Growth

English Learner proficiency and growth is worth 10% of a K-8 school’s letter grade. Schools must have a minimum of 10 AZELLA FAY students to be eligible for the points. EL proficiency is worth 5% and EL growth is worth 5%.

EL calculations include students in grades K-8 with an EL need (e.g., with a less than proficient score on AZELLA in the current or prior fiscal year), including recent arrivals. EL students must also be AZELLA FAY. To be included in the EL growth calculations, two test records are required. Invalid test records count as not tested. Schools with less than 10 AZELLA FAY EL students are not eligible for these points.

EL proficiency calculates the proficiency percentage of EL students. The following formula is used.

$$EL\ School\ Proficiency\ \% = 100 \left[\frac{(No.\ of\ AZELLA\ FAY\ students\ proficient\ on\ AZELLA)}{(No.\ of\ AZELLA\ FAY\ students\ with\ an\ EL\ need,\ including\ parent\ withdrawals,\ who\ had\ a\ valid\ current\ AZELLA\ proficiency\ level)} \right]$$

To earn proficiency points, the school’s EL proficiency percentage is compared to the State’s current year proficiency percentage.

$$EL\ K - 8\ Statewide\ CY\ Proficiency\ \% = 100 \left[\frac{(Sum\ of\ School\ Averages\ that\ have\ the\ necessary\ AZELLA\ FAY\ n - count)}{(No.\ of\ Schools\ that\ have\ the\ necessary\ AZELLA\ FAY\ n - count\ to\ be\ eligible\ for\ points)} \right]$$

Up to 5 points are awarded for proficiency using the following system:

TRANSFORMED	Range	Points
EL Proficiency is greater than or equal to the EL Statewide Current Year Percent Proficient	27.61 - 100	5
EL Proficiency standard deviation compared to the EL Statewide Current Year Percent Proficient is between -0.01 and -0.50	20.86 – 27.60	4
EL Proficiency standard deviation compared to the EL Statewide Current Year Percent Proficient is between -0.51 and -1.00	14.10 – 20.85	3
EL Proficiency standard deviation compared to the EL Statewide Current Year Percent Proficient is between -1.01 and -2.00	0.59 – 14.09	2
EL Proficiency standard deviation compared to the EL Statewide Current Year Percent Proficient is between -2.01 and -3.00	0.00 – 0.58	1
If a school’s EL Proficiency is 0%, due to no reclassification	0.0000	0

EL growth calculates the growth percentage of EL students using their current year compared to prior year AZELLA results, unless they are kindergarten students in which case the placement test is compared to the current year reassessment. Kindergarten students who take a placement test prior to 1/1 and then take a spring reassessment will be included.^{xiv} In addition, any student who takes a placement exam for the first time by October 1st and then takes a spring reassessment will be included. Students who had a placement exam in one school and a reassessment in another school within the same school year will not be included as they will not qualify as AZELLA FAY.

The table below shows how many points each level of growth is worth.

Prior Year Achievement Level (or Placement Test)	Current Year Achievement Level	Point Value
Basic/Intermediate	Intermediate	1
Pre-Emergent/Emergent	Basic	
Basic	Intermediate	
Intermediate	Proficient	
Pre-Emergent/Emergent	Intermediate	2
Basic/Intermediate	Proficient	
Basic	Proficient	
Pre-Emergent/Emergent	Proficient	3

The following formula is used to calculate growth:

$$EL \text{ School Growth } \% = 100 \left[\frac{\begin{aligned} &(No. \text{ of AZELLA FAY students who increased one proficiency level}) \\ &+ (No. \text{ of AZELLA FAY student who increased two proficiency levels } \times 2.0) \\ &+ (No. \text{ of AZELLA FAY students who increased three proficiency levels } \times 3.0) \end{aligned}}{\begin{aligned} &No. \text{ of AZELLA FAY students tested with an EL need, including parent} \\ &withdrawals with a valid current and prior year AZELLA proficiency level \end{aligned}} \right]$$

To earn growth points, the school’s EL growth percentage is compared to the State’s current year growth percentage.

$$EL \text{ K} - 8 \text{ Statewide Current Year Growth Percent} = 100 \left[\frac{\begin{aligned} &(Sum \text{ of EL Growth of all schools AZELLA FAY } n - \text{ count to be eligible for points}) \end{aligned}}{\begin{aligned} &No. \text{ of schools that have the necessary AZELLA FAY } n - \text{ count to be eligible for points} \end{aligned}} \right]$$

Up to 5 points are awarded for growth using the following system:

TRANSFORMED	Range	Points
EL Growth is greater than or equal to the EL Statewide Current Year Percent Growth	61.53 - 100	5
EL Growth standard deviation compared to the EL Statewide Current Year Percent Growth is between -0.01 and -0.50	51.73 – 61.52	4
EL Growth standard deviation compared to the EL Statewide Current Year Percent Growth is between -0.51 and -1.00	41.92 – 51.72	3
EL Growth standard deviation compared to the EL Statewide Current Year Percent Growth is between -1.01 and -2.00	22.31 – 41.91	2
EL Growth standard deviation compared to the EL Statewide Current Year Percent Growth is between -2.01 and -3.00	0.00 – 22.30	1
If a school’s EL Growth is 0%, due to no Growth	0.0000	0

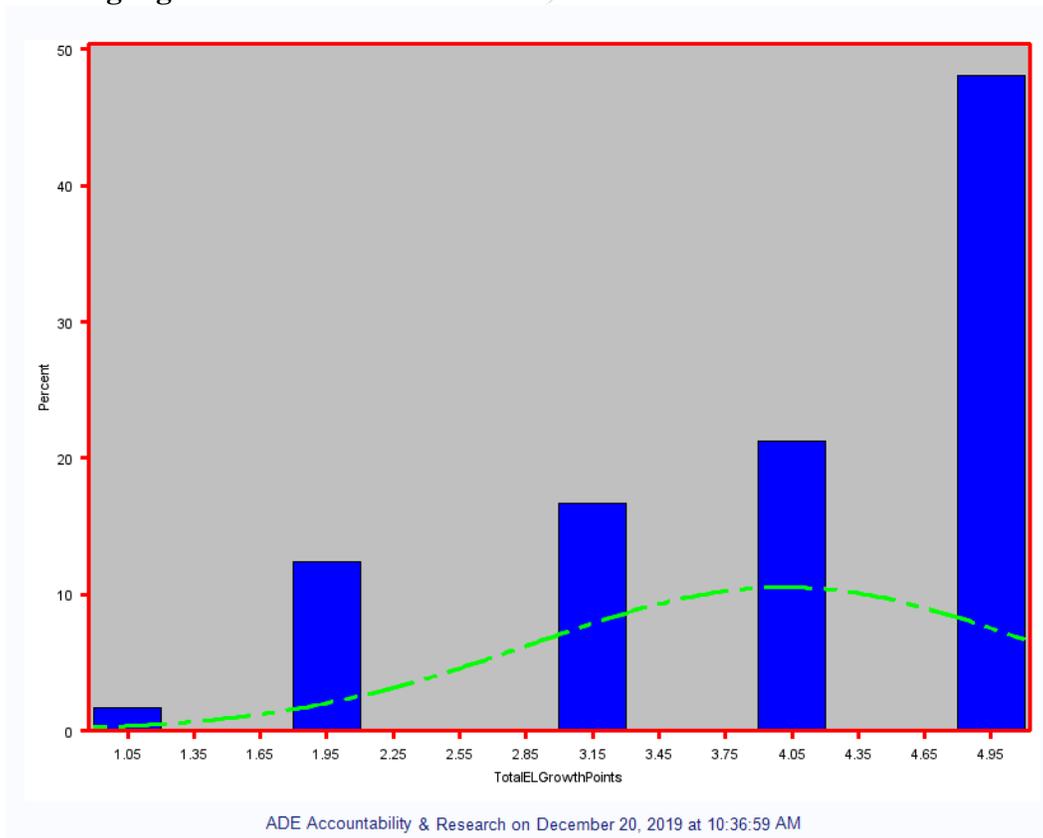
Statistics and Graphs for EL Proficiency and Growth

For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (see pages 48-49)

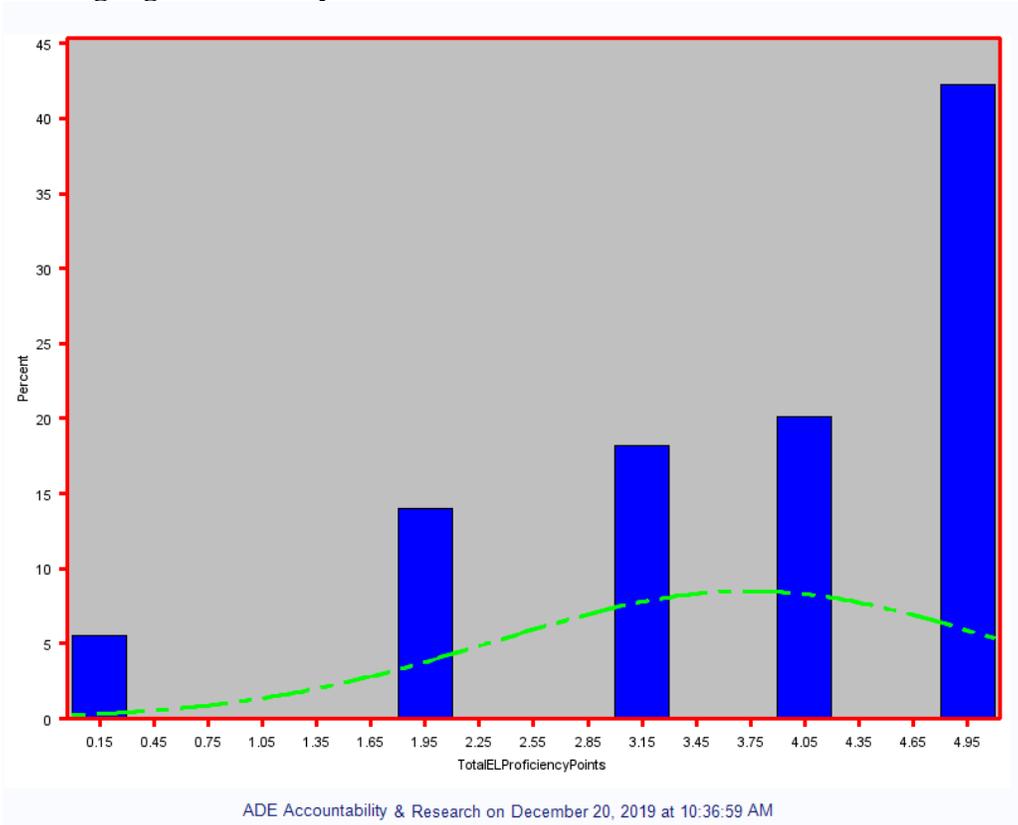
	TotalELGrowthPoints	TotalELProficiencyPoints	ELProficiencyandGrowth
Max	5.00	5.00	10.00
Mean	4.02	3.74	7.73
Min	1.00	0.00	0.00
Range	4.00	5.00	10.00
StdDev	1.14	1.41	2.38
StdErr	0.04	0.04	0.08
Var	1.29	1.98	5.66
Median	4.00	4.00	8.00
Q1	3.00	3.00	6.00
Q3	5.00	5.00	10.00
P1	1.00	0.00	1.00
P5	2.00	0.00	3.00
P10	2.00	2.00	4.00
P90	5.00	5.00	10.00
P95	5.00	5.00	10.00
P99	5.00	5.00	10.00

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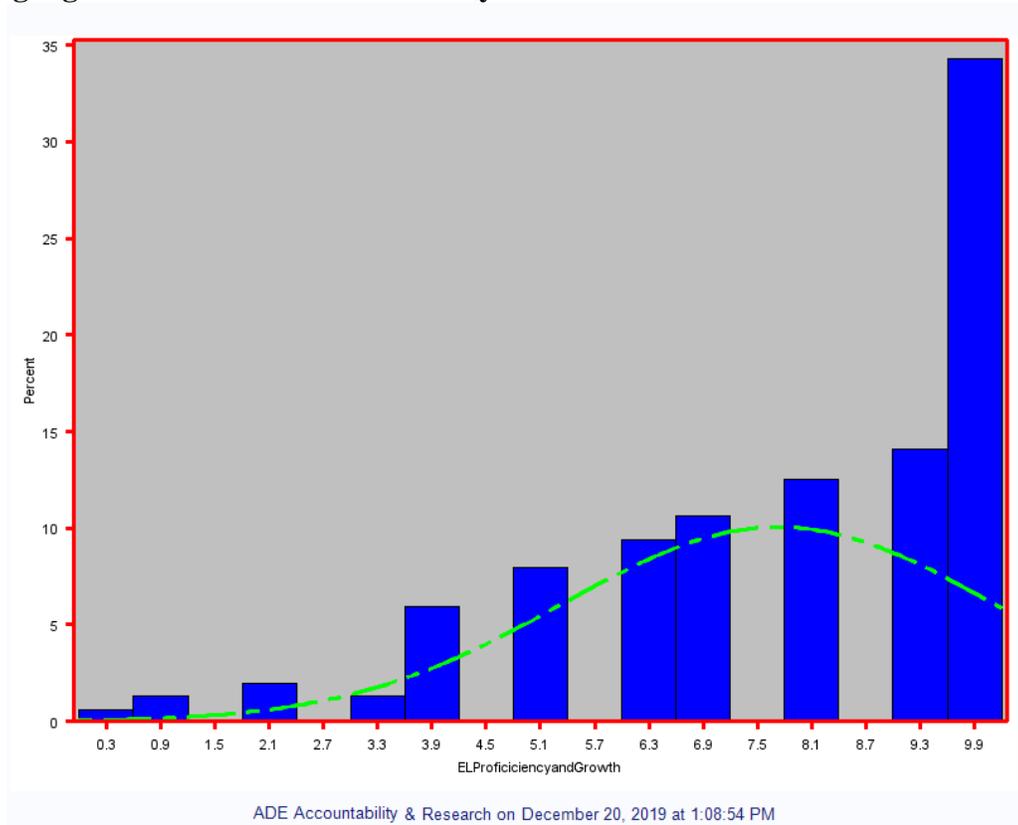
Total English Language Growth Points



Total English Language Proficiency Points



English Language Arts Total Points Proficiency and Growth



Acceleration/Readiness

The acceleration/readiness indicator is worth 10% of a K-8 school’s letter grade. Not all schools are eligible for each metric. Acceleration/Readiness points are capped at 10. The following will be utilized in the Acceleration/Readiness indicator to determine eligibility and points:

Metric	N-Size of 10 or more FAY students to be eligible	Points Available to Earn
Grades 5, 6, 7, 8 HS EOC Math		5
Grade 3 ELA Minimally Proficient	✓	5
Chronic Absenteeism	10 N-size FAY and non-FAY ^{xv}	2
Subgroup Improvement	By subgroup	2 points per subgroup up to 6 points total
Special Education Inclusion	✓	2

All prior year comparisons included in the Acceleration/Readiness component are pulled over from the prior year’s information. The only exception is Chronic Absenteeism for which the prior year comparison was recalculated due to a business rule change to remove Kindergarten students and students flagged as chronically ill in AzEDS from the calculation.

Grades 5-8 HS EOC Math Increase

The intent of this metric is for schools to annually increase their percent proficient of grades 5-8 students taking HS EOC math. The Grades 5-8 HS EOC Math calculations include any FAY student in Grade 5, 6, 7, and 8 that takes a HS EOC Math AzMERIT assessment – Algebra 1, Geometry, Algebra 2. There is no minimum N-Size applied to this metric. Schools can earn five points three different ways:

1. Increasing the percentage of students who take the test and pass HS EOC math
2. Maintaining a current and prior year percentage of 100% proficient on HS EOC math^{xvi}
3. The percent proficient on HS EOC math is greater than or equal to 25% for all current year FAY 8th grade students

The following formulas are used to calculate proficiency percentages for current year, prior year, and Grade 8 only students. The same weighting system used in proficiency calculations is applied to these calculations.

Grades 5, 6, 7, and 8 HS EOC Math School Level

$$\begin{aligned}
 & \text{CY Proficiency \%} \\
 & = 100 \left[\frac{\text{(No. of CY Grades 5, 6, 7 and 8 FAY students that are P or HP on AzMERIT HS EOC Math)}}{\text{(Total CY FAY enrollment for Grades 5, 6, 7, and 8 students that attempted an AzMERIT HS EOC Math)}} \right]
 \end{aligned}$$

Grades 5, 6, 7, and 8 HS EOC Math School Level

$$\text{PY Proficiency \%} = 100 \left[\frac{(\text{No. of PY Grades 5, 6, 7 and 8 FAY students that are P or HP on AzMERIT HS EOC Math})}{(\text{Total PY FAY enrollment for Grades 5, 6, 7, and 8 students that attempted an AzMERIT HS EOC Math})} \right]$$

$$\begin{aligned} \text{Grade 5 to 8 HS EOC Math \% Proficient Increase} \\ = (\text{Grades 5, 6, 7 and 8 CY Proficiency \%}) - (\text{Grades 5, 6, 7 and 8 PY Proficiency \%}) \end{aligned}$$

Grade 8 HS EOC Math School Level

$$\text{CY Proficiency \%} = 100 \left[\frac{(\text{No. of CY Grade 8 FAY students that are P or HP on AzMERIT HS EOC Math})}{(\text{Total CY FAY enrollment for Grade 8})} \right]$$

The following details how points are earned. These are all or nothing points.

Grades 5-8 HS EOC Math Points (0 or 5 points)

- A school's current year percentage of students who take the test and pass HS EOC math is greater than the school's prior year percentage of students who take the test and pass HS EOC math = 5 points
- A school's current year and prior year percentage of students who take the test and pass HS EOC math equals 100 = 5 points
- A school's current year Grade 8 percentage of students who pass a HS EOC math is greater than 25% = 5 points
- A school's current year percentage of students who take the test and pass HS EOC math is less than or equal to the school's prior year percentage of students who take the test and pass HS EOC math AND a school's current year Grade 8 percentage of students who pass a HS EOC math is less than 25% = 0 points

Grade 3 ELA Reduction in FAY Minimally Proficient

The intent of this metric is to reduce the percentage of grade 3 students who are minimally proficient on AzMERIT ELA from prior year to current year. To be eligible for these points, a school must meet the minimum N-Size of 10 FAY students. Schools can earn five points two different ways:

1. Decreasing the school's prior year percent minimally proficient
2. Have a current year percent minimally proficient less than 12%

Below are the formulas used to calculate the percentages:

Grade 3 ELA Current Year

$$\text{Minimally Proficient \%} = 100 \left[\frac{(\text{No. of CY Grades 3 ELA FAY students who were MP})}{(\text{Total CY Grade 3 ELA FAY Students with a valid test score})} \right]$$

Grade 3 ELA Prior Year

$$\text{Minimally Proficient \%} = 100 \left[\frac{(\text{No. of PY Grades 3 ELA FAY students who were MP})}{(\text{Total PY Grade 3 ELA FAY Students with a valid test score})} \right]$$

$$\text{Grade 3 ELA Reduction in FAY MP} = (\text{Grade 3 ELA CY MP \%} - \text{Grade 3 ELA PY MP \%})$$

The following details how points are earned. These are all or nothing points.

Grades 3 ELA Reduction Points (0 or 5 points)

- A school's current year minimally proficient percentage is less than the school's prior year minimally proficient percentage = 5 points
- A school's current year minimally proficient percentage is less than 12% = 5 points
- A school's current year minimally proficient percentage is greater than or equal to the school's prior year minimally proficient percentage = 0 points

Reduction in Chronic Absenteeism

The intent of this metric is to reduce the school's chronic absenteeism percentage from prior year to current year. This calculation includes grades 1-8 students. Students who are flagged as chronically ill in AzEDS are removed from the chronic absenteeism calculation^{xvii}. All absences reported for a student whether excused or unexcused are included. To be eligible for these points, a school must meet the minimum N-Size of 10 students. Schools can earn two points two different ways:

1. Decreasing the school's prior year chronic absenteeism percentage
2. Have a current year chronic absenteeism percentage less than 4%

Below are the formulas used to calculate the percentages:

$$CY \text{ Chronic Absenteeism } \% = 100 \left[\frac{(No. \text{ of } CY \text{ students who have greater than 10\% absences})}{(Total \text{ } CY \text{ students})} \right]$$

$$PY \text{ Chronic Absenteeism } \% = 100 \left[\frac{(No. \text{ of } PY \text{ students who have greater than 10\% absences})}{(PY \text{ year students})} \right]$$

$$\text{Chronic Absenteeism Reduction} = (CY \text{ Chronic Absenteeism } \% - PY \text{ Chronic Absenteeism } \%)$$

The following details how points are earned. These are all or nothing points.

Reduction in Chronic Absenteeism Points (0 or 2 points)

- A school's current year chronic absenteeism percentage is less than the school's prior year chronic absenteeism percentage = 2 points
- A school's current year chronic absenteeism percentage is less than 4% = 2 points
- A school's current year chronic absenteeism percentage is greater than or equal to the school's prior year chronic absenteeism percentage = 0 points

Subgroup Improvement

The intent of this metric is to see annual improvement in subgroup (SG) proficiency in AzMERIT ELA and Math. The following subgroups are evaluated by test subject (ELA, Math):

1. White
2. Hispanic
3. Native American/Alaskan Indian
4. Asian
5. African American
6. Pacific Islander
7. Two or More Races
8. English Learner
9. Special Education
10. Economically Disadvantaged
11. Parent in Military (reported for Fiscal Year 2019 only, no points available)^{xviii}
12. EL and FEP1-4 (reported for Fiscal Year 2019 only, no points available)^{xix}
13. Homeless (reported for Fiscal Year 2019 only, no points available)^{xx}

To be eligible, each subgroup must have a least 10 FAY students at the school level. The n-count must be met in both the current year and prior year. If a school meets the N-Size for all subgroups, they would have 20 chances (10 subgroups times 2 subjects) to earn up to 6 points with each subgroup worth 2 points.

The formulas below are calculated for each subgroup and subject (ELA and Math). The same weighting system used in proficiency calculations is applied to these calculations.

$$SG\ CY\ Proficiency\ \% = 100 \left[\frac{\begin{aligned} &((No.\ of\ CY\ FAY\ students\ in\ the\ SG\ that\ are\ PP\ on\ AzMERIT\ or\ MSAA)0.6) \\ &+((No.\ of\ CY\ FAY\ students\ in\ the\ SG\ that\ are\ P\ on\ AzMERIT\ or\ MSAA)1.0) \\ &+((No.\ of\ CY\ FAY\ students\ in\ the\ SG\ that\ are\ HP\ on\ AzMERIT\ or\ MSAA)1.3) \end{aligned}}{(Total\ CY\ FAY\ students\ in\ the\ SG\ who\ took\ the\ test)} \right]$$

$$SG\ PY\ Proficiency\ \% = 100 \left[\frac{\begin{aligned} &((No.\ of\ PY\ FAY\ students\ in\ the\ SG\ that\ are\ PP\ on\ AzMERIT\ or\ MSAA)0.6) \\ &+((No.\ of\ PY\ FAY\ students\ in\ the\ SG\ that\ are\ P\ on\ AzMERIT\ or\ MSAA)1.0) \\ &+((No.\ of\ PY\ FAY\ students\ in\ the\ SG\ that\ are\ HP\ on\ AzMERIT\ or\ MSAA)1.3) \end{aligned}}{(Total\ PY\ FAY\ students\ in\ the\ SG\ who\ took\ the\ test)} \right]$$

xxi

The following details how points are earned. These points are incremental, such that a school can earn 2, 4, or 6 points.

Subgroup Improvement Points (Up to 6 points; each subgroup and subject is worth 2 points)

- Each subgroup and subject is evaluated separately
- If eligibility is met:
 - A school's subgroup current year proficiency percentage is greater than the school's subgroup prior year proficiency percentage = 2 points
 - A school's current year subgroup proficiency percentage is less than or equal to the school's subgroup prior year proficiency percentage = 0 points

Special Education Inclusion

The intent of this metric is to reward schools that have greater than the state average (9%) of special education (SPED) students in general education classroom at least 80% of the day. This calculation includes grades K-8 students. To be eligible for these points, a school must meet the minimum N-Size of 10 FAY students.

$$\text{School Level FAY SPED Inclusion \%} = \frac{\text{No. of FAY SPED students spending 80\% of more of their day in the general education classroom}}{\text{(Total CY FAY enrollment)}}$$

Special Education Inclusion Points (0 or 2 points)

- Schools with greater than 9% of their FAY population in special education spending 80%+ of their day in the general education classroom receive points

Statistics and Graphs for Acceleration and Readiness

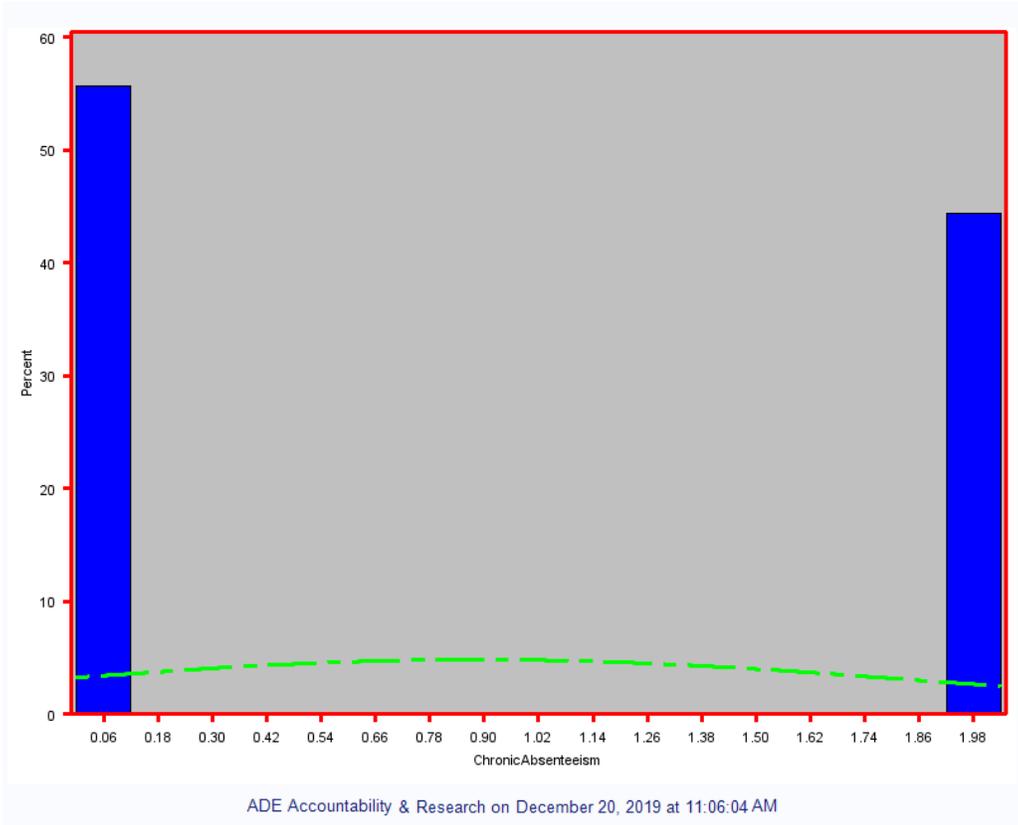
For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (see pages 48-49)

Summary Tables

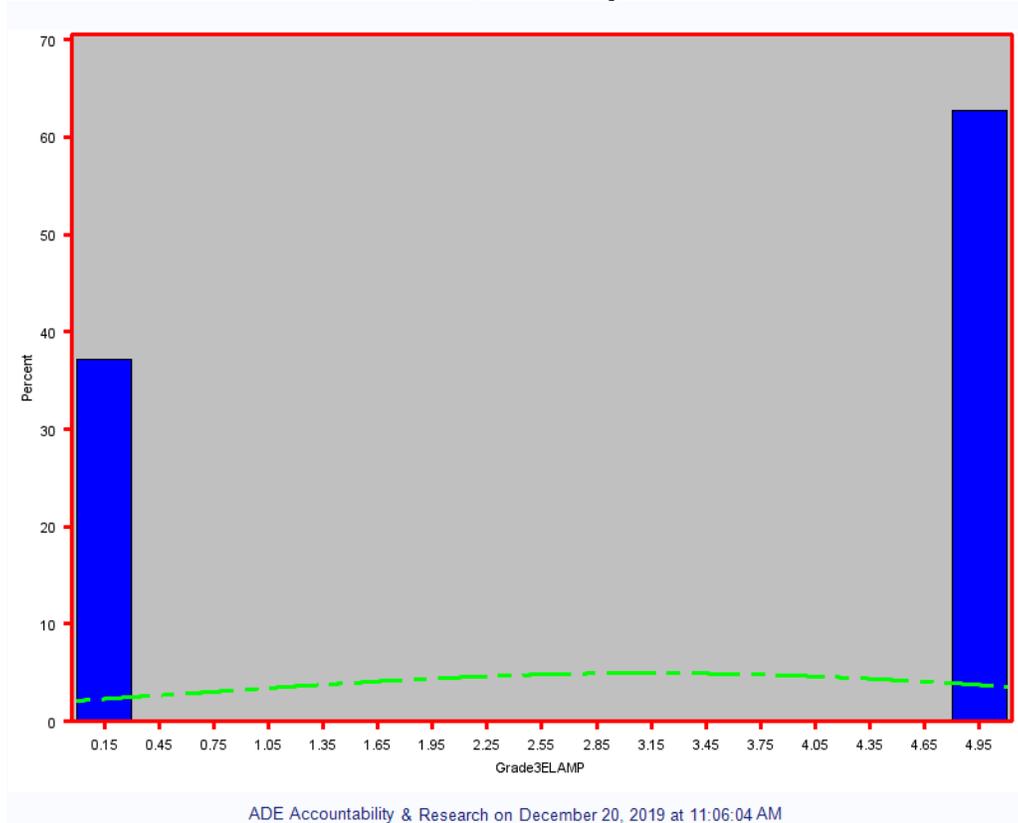
	ChronicAbsenteeism	Grade3ELAMP	Grades58HSEOC	SpecialEducationInclusion	SubgroupImprovement	TotalARPoints
Max	2.00	5.00	5.00	2.00	6.00	10.00
Mean	0.89	3.14	4.46	0.94	5.45	8.62
Min	0.00	0.00	0.00	0.00	0.00	0.00
Range	2.00	5.00	5.00	2.00	6.00	10.00
StdDev	0.99	2.42	1.55	1.00	1.41	2.46
StdErr	0.03	0.07	0.07	0.03	0.04	0.06
Var	0.99	5.85	2.39	1.00	1.99	6.05
Median	0.00	5.00	5.00	0.00	6.00	10.00
Q1	0.00	0.00	5.00	0.00	6.00	8.00
Q3	2.00	5.00	5.00	2.00	6.00	10.00
P1	0.00	0.00	0.00	0.00	0.00	0.00
P5	0.00	0.00	0.00	0.00	2.00	2.00
P10	0.00	0.00	0.00	0.00	4.00	6.00
P90	2.00	5.00	5.00	2.00	6.00	10.00
P95	2.00	5.00	5.00	2.00	6.00	10.00
P99	2.00	5.00	5.00	2.00	6.00	10.00

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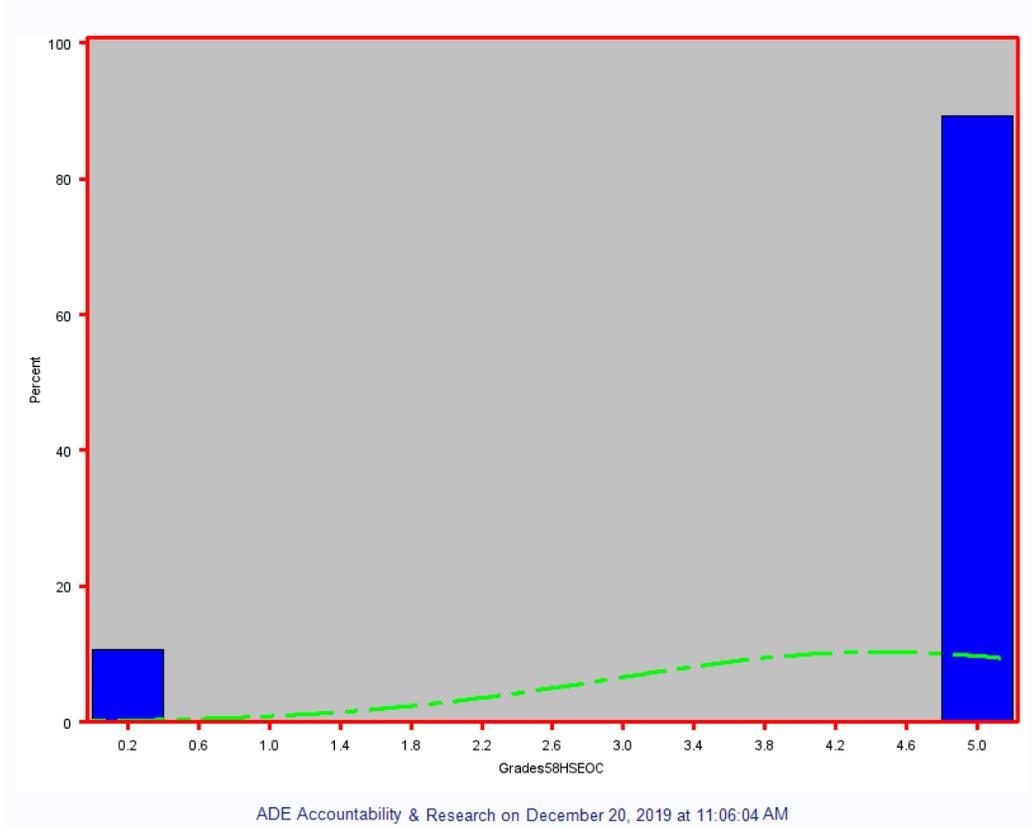
Acceleration Readiness: Chronic Absenteeism



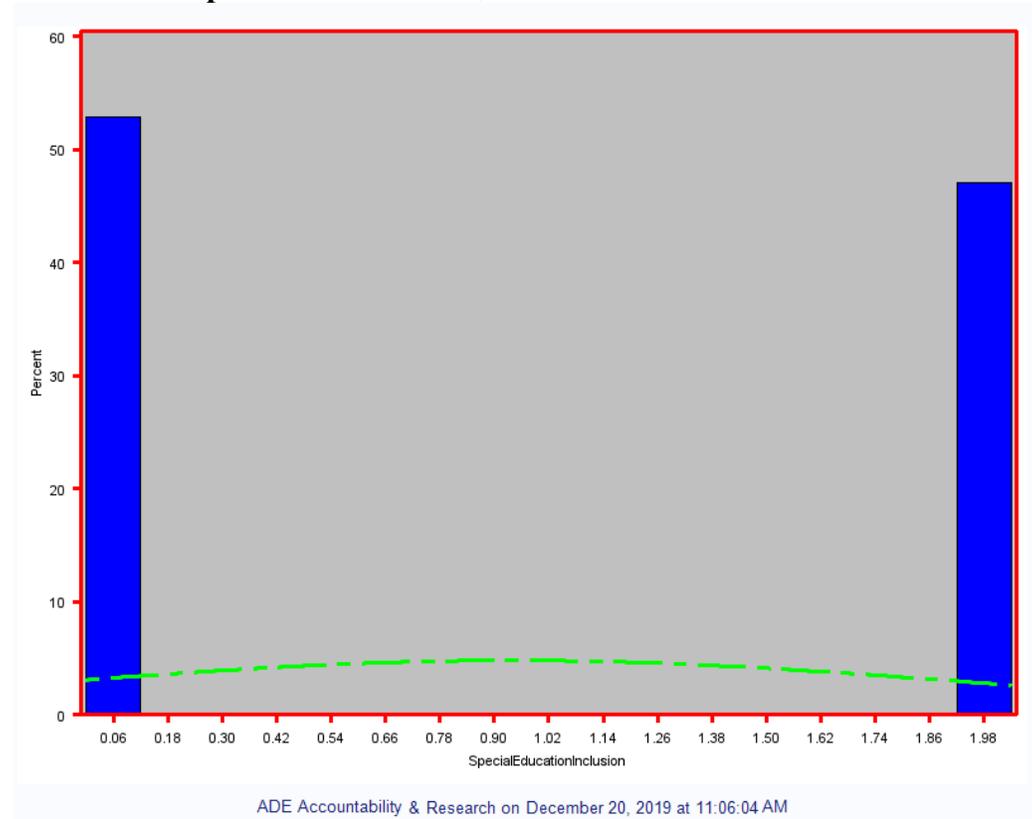
Acceleration Readiness: Grade 3 Reduction in Minimally Proficient



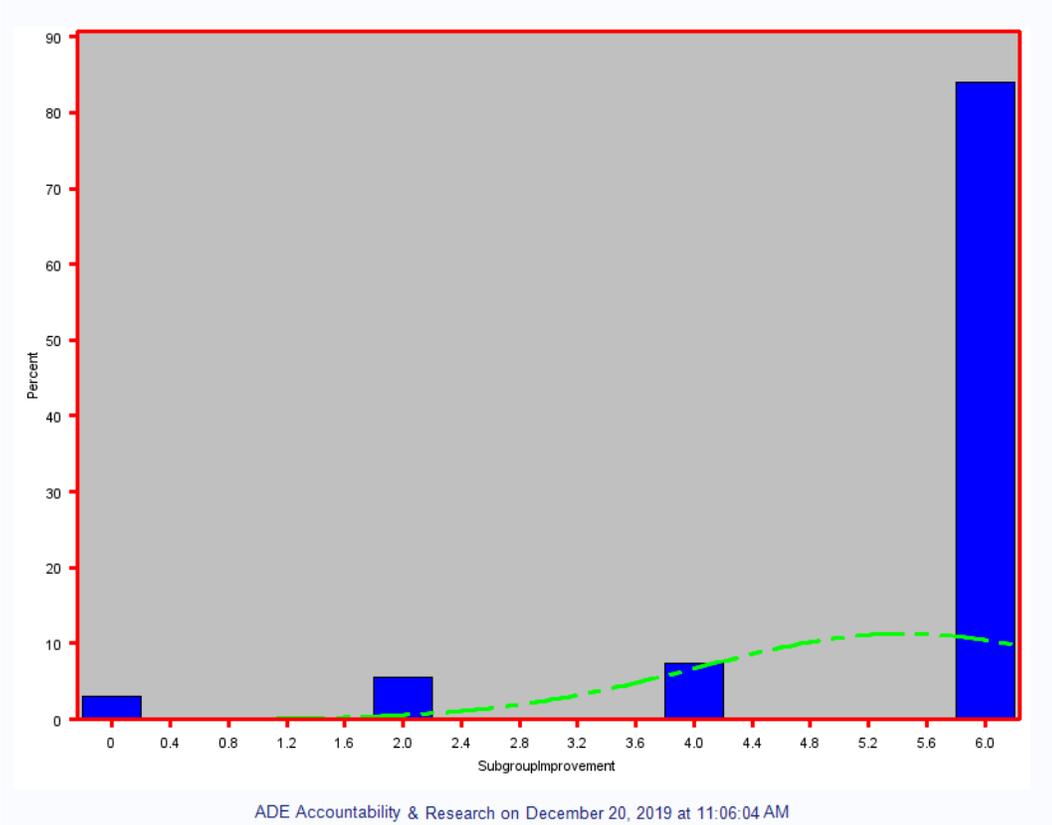
Acceleration Readiness: Grade 5-8 End of Course



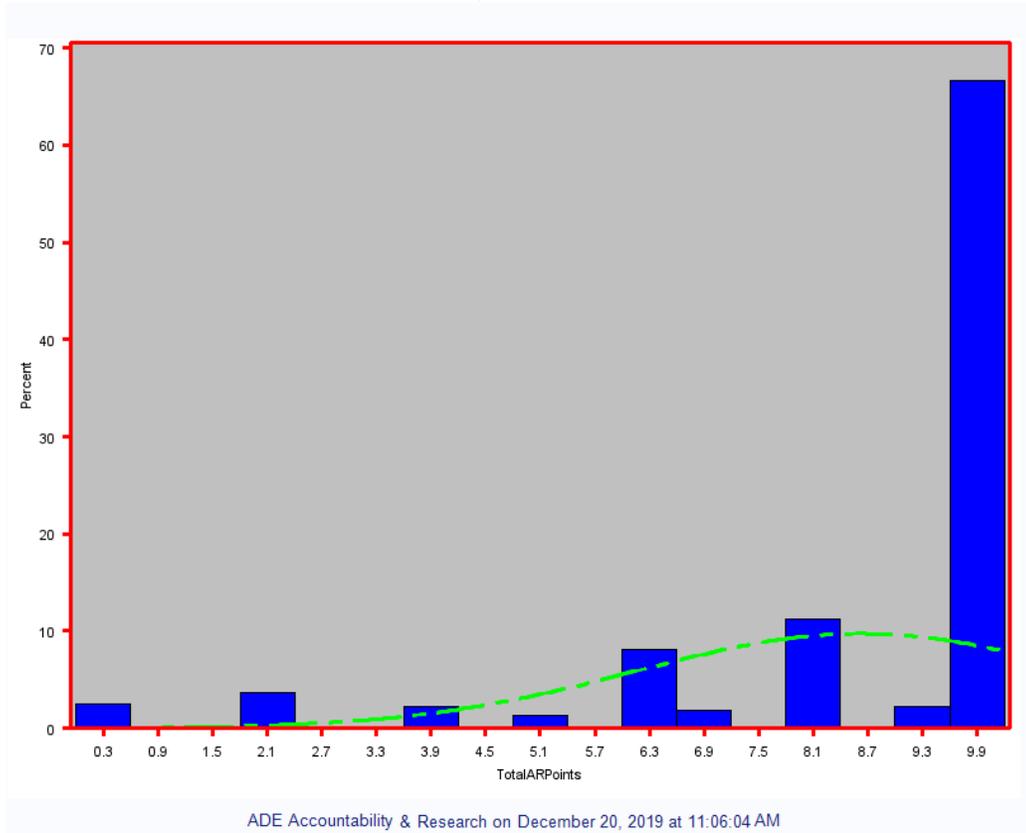
Acceleration Readiness: Special Education Inclusion



Acceleration Readiness: Subgroup Improvement



Acceleration Readiness: Total Points Earned



Bonus Points

Schools can earn bonus points two different ways.

Special Education Enrollment

Schools with greater than or equal to 80% of the current year state average of FAY students enrolled in special education will earn 2 bonus points. Schools had to have greater than or equal to 80% of the state average 11.79^{xxii} to receive the bonus points.

The following formulas are used for the calculations:

$$\text{School Level CY FAY SPED Program Enrollment \%} \\ = 100 \left[\frac{(\text{No. of CY FAY students who are enrolled in a SPED program})}{(\text{Total CY FAY enrollment})} \right]$$

$$\text{Statewide CY FAY SPED Program Enrollment \%} \\ = 100 \left[\frac{(\text{No. of CY FAY students who are enrolled in a SPED program})}{(\text{Total CY FAY enrollment})} \right]$$

$$80\% \text{ of Statewide \%} = 80\%(\text{Statewide CY FAY SPED Program Enrollment \%})$$

$$\text{FAY SPED Program Enrollment Bonus Point} = (\text{School Level CY FAY SPED Program Enrollment \%} - 80\% \text{ of Statewide \%})$$

FAY Special Education Program Enrollment Bonus Points (0 or 2 points)

- A school's current year FAY special education program enrollment percentage is greater than or equal to 80% of the statewide percentage = 2 points
- A school's current year FAY special education program enrollment percentage is less than 80% of the statewide percentage = 0 points

Science Proficiency

Schools can earn up to 3 bonus points on science achievement of FAY students.

The following formula is used for the calculations:

$$\text{Science Percent Proficient} = 100 \left[\frac{(\text{No. of CY FAY students that are P or HP on AIMS or AIMS-A Science})}{(\text{No. of FAY students tested on AIMS or AIMS-A Science})} \right]$$

The following details how points are earned.

Science Proficiency Bonus Points (0, 1.5 or 3 points)

- A school's current year percentage of proficient students is greater than or equal to 80.3+ = 3 points
- A school's current year percentage of proficient students is greater than 58.6 and less than 80.29 = 1.5 points^{xxiii}

Statistics and Graphs for Bonus Points

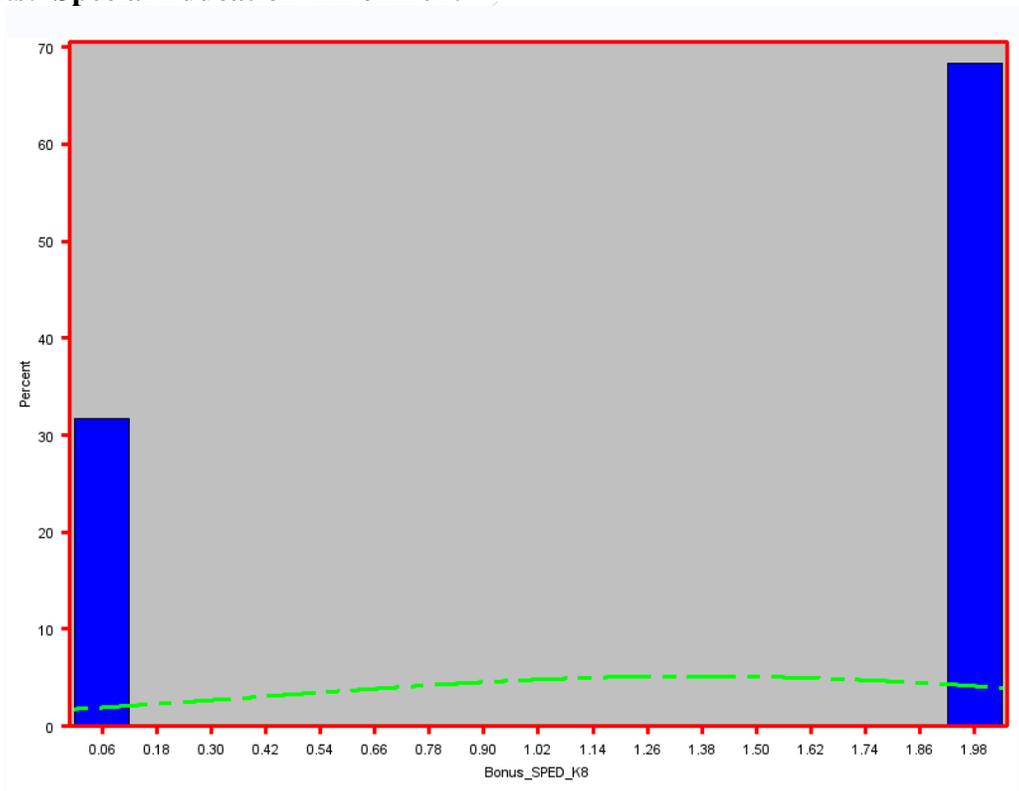
For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (pages 48-49)

Summary Tables

	SPEDBonusPoints	BONUS_SCI_K8	TotalBonusPoints
Max	2.00	3.00	5.00
Mean	1.38	0.98	2.44
Min	0.00	0.00	0.00
Range	2.00	3.00	5.00
StdDev	0.92	1.15	1.27
StdErr	0.02	0.03	0.03
Var	0.85	1.31	1.61
Median	2.00	0.00	2.00
Q1	0.00	0.00	2.00
Q3	2.00	1.50	3.50
P1	0.00	0.00	0.00
P5	0.00	0.00	0.00
P10	0.00	0.00	0.00
P90	2.00	3.00	3.50
P95	2.00	3.00	5.00
P99	2.00	3.00	5.00

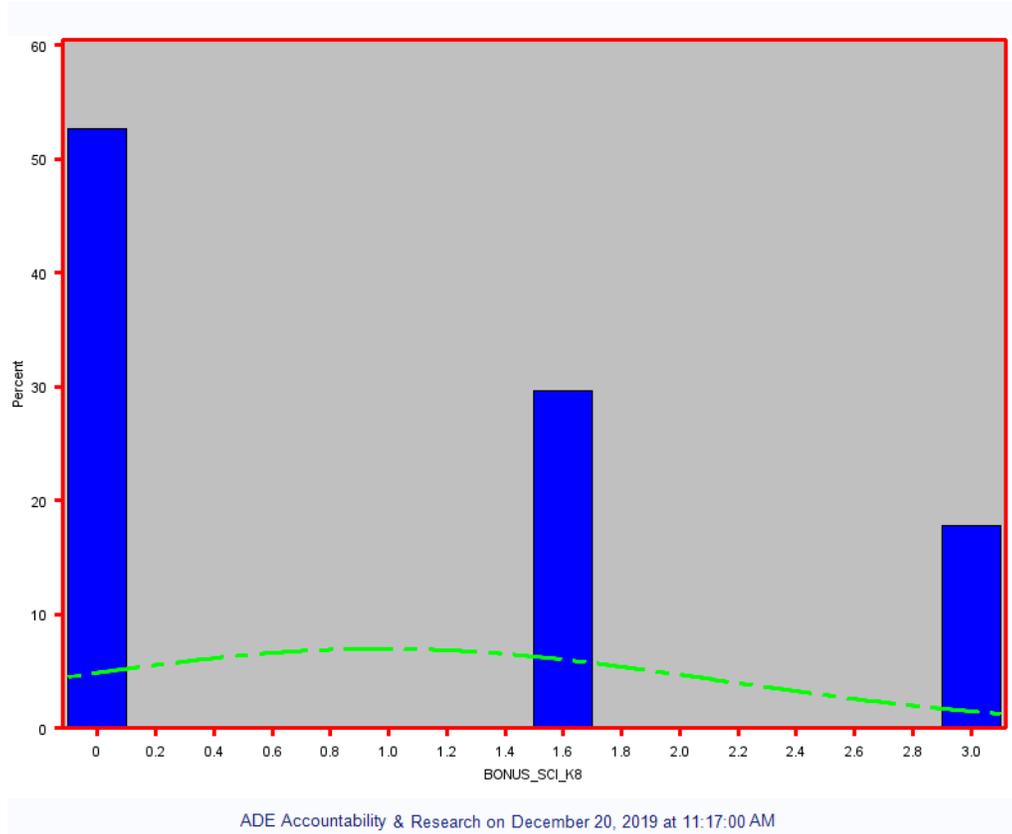
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Bonus Points: Special Education Enrollment

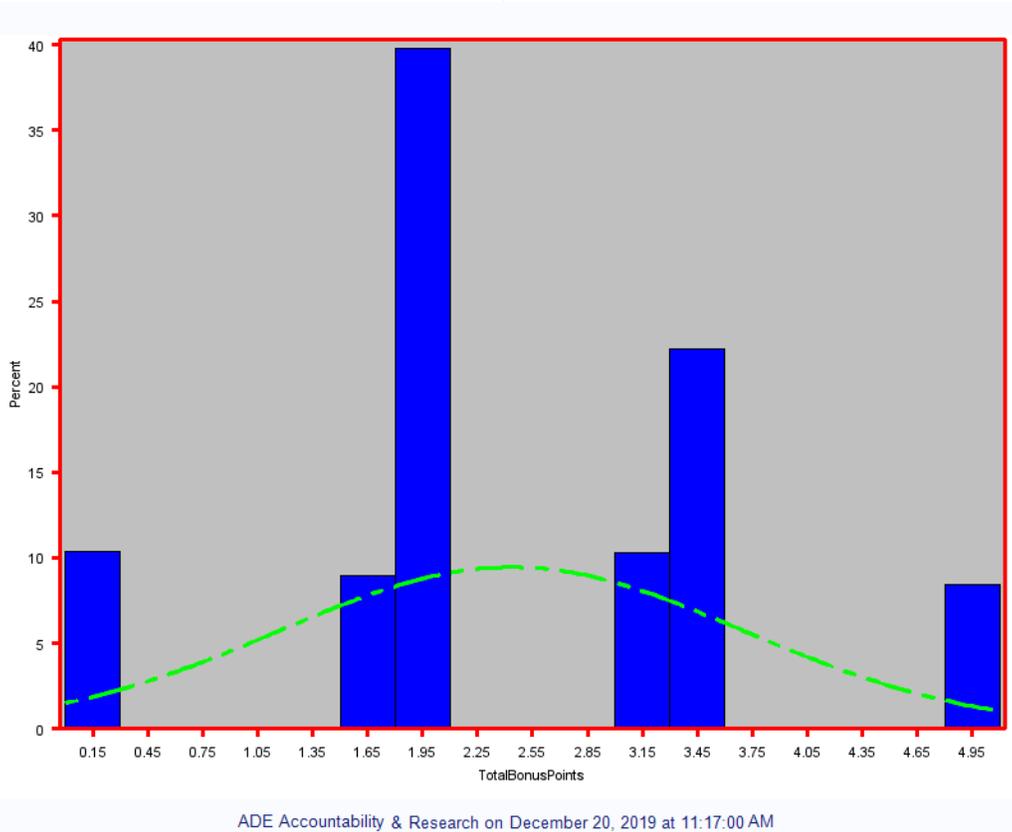


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Bonus Points: Science Assessment



Bonus Points: Total Points Earned



Calculating Total Points^{xxiv}

Schools that meet the N-Size for every indicator can earn up to 100 points:

Letter Grade

$$= \left[\begin{array}{l} (0.30(Proficiency)) + (0.50(Growth)) + (EL Proficient Points) \\ + (EL Growth Points) + (Acceleration - Readiness Points) \end{array} \right] + Bonus Points$$

Schools that meet the N-Size for every indicator except for EL Proficiency and Growth can earn up to 90 points:

Letter Grade

$$= 100 \left\langle \left[\frac{\begin{array}{l} (0.30(Proficiency)) + (0.50(Growth)) \\ + (Acceleration - Readiness Points) \end{array}}{90} \right] \right\rangle + Bonus Points$$

Schools that do not meet the N-Size EL Proficiency and Growth and do not qualify for any acceleration/readiness indicators (i.e., do not meet the N-Size of 10 FAY students or is not eligible) can earn up to 80 points:

Letter Grade

$$= 100 \left\langle \left[\frac{\begin{array}{l} (0.30(Proficiency)) + (0.50(Growth)) \end{array}}{80} \right] \right\rangle + Bonus Points$$

Schools without enough students to be eligible for 80 points will be not rated in FY18.

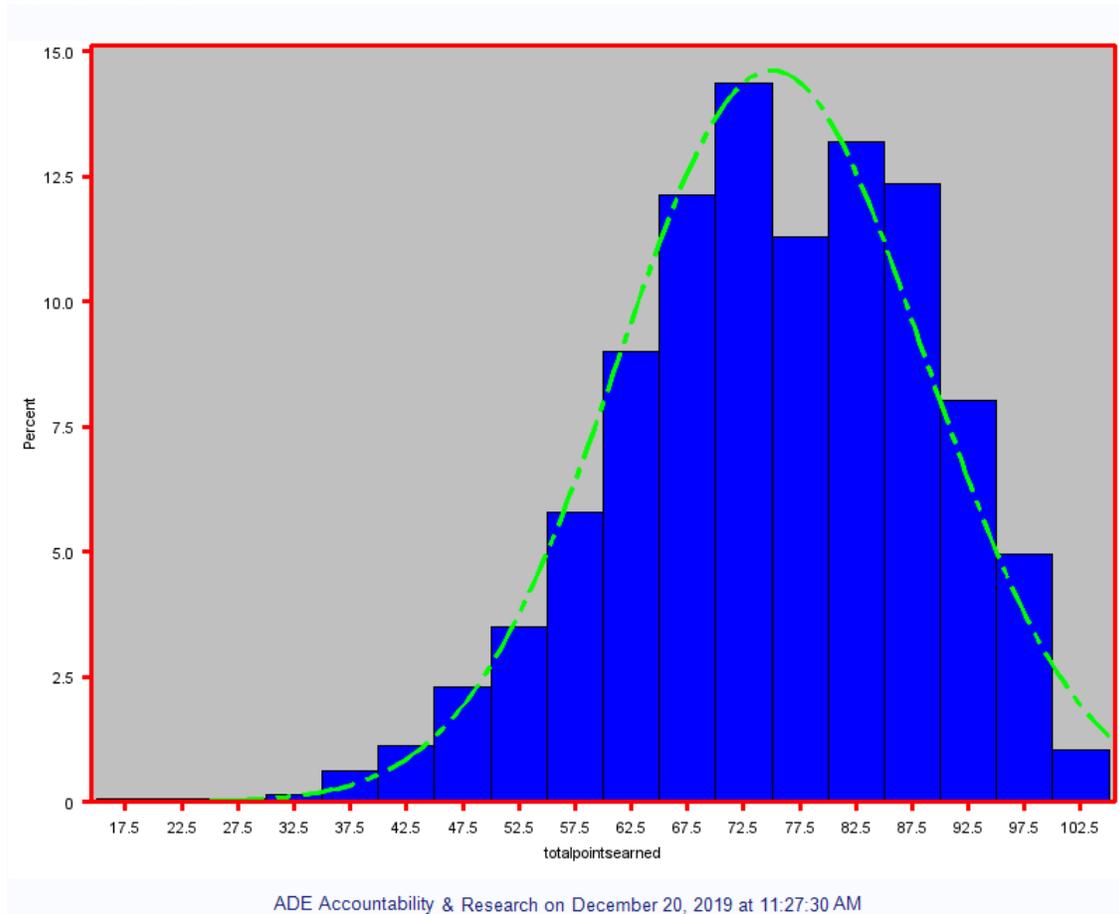
Statistics and Graphs for Total Points

For meaning of terms please see Appendix: List of Statistical Summary Tables and Graph Definitions (pages 48-49)

Summary Tables	
	totalpointsearned
Max	103.00
Mean	75.02
Min	17.59
Range	85.41
StdDev	13.65
StdErr	0.36
Var	186.20
Median	75.41
Q1	66.23
Q3	85.32
P1	40.16
P5	51.71
P10	57.10
P90	92.25
P95	95.81
P99	100.04

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Total Points Earned



Appendix

List of Acronyms and Abbreviations

Acronym/Abbreviation	Meaning
ADM	Annual Daily Membership
AIMS	Arizona Instrument to Measure the Standard
AIMS-A	Arizona Instrument to Measure the Standard – A (Special Education Test)
AVG	Average
AzEDS	Arizona Education System
AZELLA	Arizona English Language Learner Assessment
AzMERIT	Arizona’s Measurement of Educational to Inform Teaching
CCRI	College and Career Readiness Index
CY	Current Year
EL	English Language
ELA	English Language Arts
EOC	End of Course
FAY	Full Academic Year
FY	Fiscal Year
HP	Highly Performing on AzMERIT
MP	Minimally Performing on AzMERIT
MSAA	Multi-State Alternate Assessment
No.	Number
P	Proficient Performing on AzMERIT
PP	Partially Performing on AzMERIT
PY	Previous Year
RALEP	Recently Arrived Limited English Proficiency
SG	Subgroup
SPED	Special Education
SGP	Student Growth Percentile
SGT	Student Growth Target

List of Statistical Summary Tables and Graph Definitions

Term	Full Name	Definition
Max	maximum	The largest observation
Min	minimum	The smallest observation
Mean	aka "average"	The sum of all numbers divided by the number of observations
Range	range	The difference between the lowest and highest value
StdDev	standard deviation	Is a measure of the amount of variation or dispersion of a set of values
StdErr	standard error	Is the standard deviation of its sampling distribution or an estimate of that standard deviation
Var	variance	Is the expectation of the squared deviation of a random variable from its mean
Median	median	The middle observation in a set of data
Q1	quartile one (first quartile)	A number for which 25% of the data is less than that number
Q3	quartile three (third quartile)	A number for which 75% of the data is less than that number
P1	1 st percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. Only 1% of observations are below this number.
P5	5 th percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. Only 5% of observations are below this number
P10	10 th percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. Only 10% of observations are below this number
P90	90 th percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. 90% of observations are below this number
P95	95 th percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. 95% of observations are below this number
P99	99 th percentile	Is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations falls. 99% of observations are below this number

-
- ⁱ Graphs and statistics added
 - ⁱⁱ Updated to include language from A.R.S. 241 2019-04-09
 - ⁱⁱⁱ Updated to include description of AZELLA FAY 2019-04-09
 - ^{iv} Added clarification about 10 break in enrollment 2019-10-29
 - ^v Updated to reflect SBE approved change to remove Kindergarten students and students flagged as Chronically Ill in AzEDS from Chronic Absenteeism calculation 2019-05-07
 - ^{vi} Added Parent in Military description 2019-05-07
 - ^{vii} Added clarification about the students included in the A-F Static File 2019-06-18
 - ^{viii} Added cut scores approved by the State Board of Education on October 28th 2019-10-29
 - ^{ix} Added 3 D's information 2019-10-29
 - ^x Added clarification that year 1 and year 2 RALEP students are removed from proficiency calculations 2019-09-03
 - ^{xi} Updated to include the first day of the AzMERIT State Testing Window as the enrollment data used for the Percent Tested calculation 2019-04-08
 - ^{xii} Updated image to reflect current Fiscal Year 2019-05-07
 - ^{xiii} Corrected the terms used within the formula 2019-10-29
 - ^{xiv} Added clarification about kindergarten placement tests 2019-10-29
 - ^{xv} Clarified that the Chronic Absenteeism calculation includes both FAY and non-FAY students 2019-05-08
 - ^{xvi} Clarified percent proficient 2019-11-13
 - ^{xvii} Added clarification that Chronic Absenteeism calculation excludes students flagged as chronically ill in AzEDS 2019-05-07
 - ^{xviii} Added Parent in Military subgroup – used for reporting purposes only for FY19 2019-05-07
 - ^{xix} Added clarification about EL and FEP1-4 subgroup 2019-10-29
 - ^{xx} Added clarification about Homeless subgroup 2019-10-29
 - ^{xxi} Corrected spelling error in formula 2019-10-29
 - ^{xxii} Updated to reflect the percentage. The value stated in this document is rounded; however, calculations do not use a rounded value.
 - ^{xxiii} Corrected wording 2019-11-06
 - ^{xxiv} Corrected formulas to reflect bonus points added after the percentage calculation 2019-10-29