



Understanding A-F School Grading

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Overview of A-F School Grading

Overview of A-F School Grading

- For the first time in 2017-18, all schools will receive an A-F grade.
- The A-F grading system replaces the prior system of Reward, Focus, and Priority schools.

Schools are evaluated based on performance on various indicators.

All Schools are evaluated on:

- Achievement
- Growth
- Chronically Out of School
- Getting English Learners to English Proficiency

High Schools are evaluated additionally on:

- Graduation Rate
- Ready Graduates (Graduates with a 21+ ACT Composite Score)

Most indicators provide an absolute and a growth pathway for schools to demonstrate success.

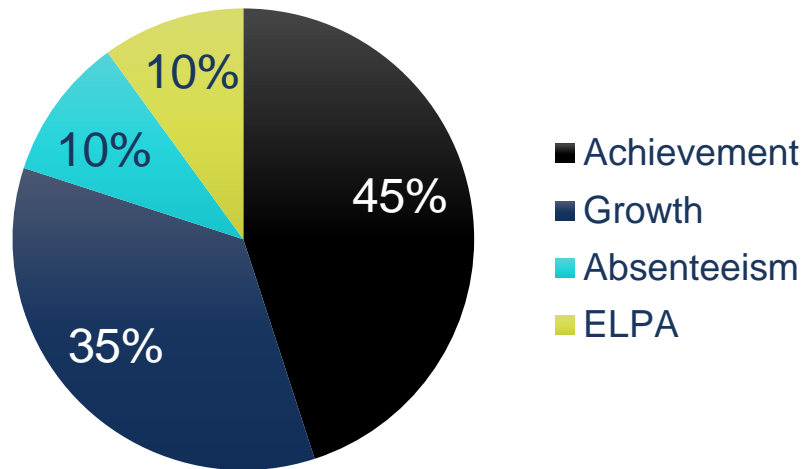
Grade	Absolute Pathway	AMO Target Pathway
A	95 – 100%	Graduation Rate Exceeds Double AMO Target
B	90 – 94.9%	Graduation Rate Exceeds AMO Target
C	80 – 89.9%	Upper Bound of Confidence Interval Equals or Exceeds AMO Target
D	67 – 79.9%	Upper Bound of Confidence Interval Exceeds Prior Graduation Rate
F	0 – 66.9%	Upper Bound of Confidence Interval is Less Than or Equal to Prior Year Graduation Rate

Schools are graded on each indicator for All Students and eligible subgroups.

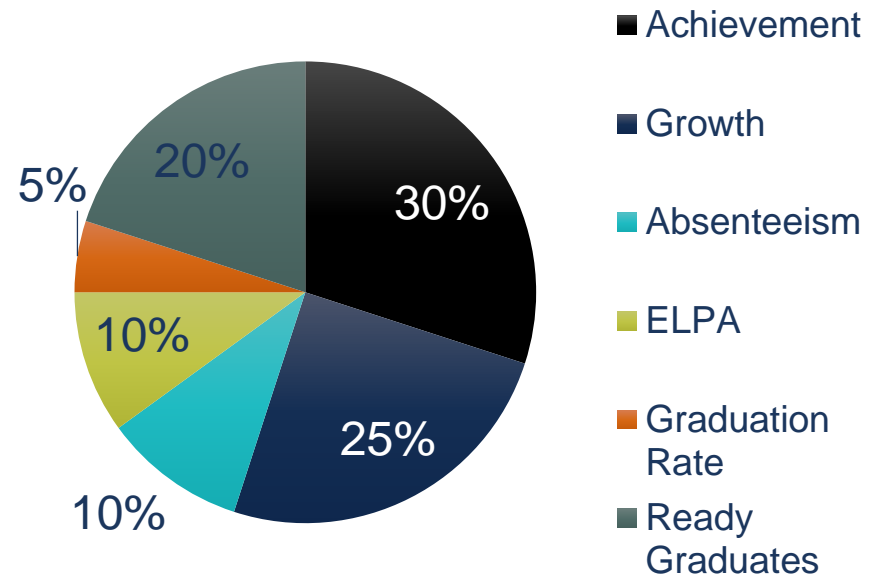
	Achievement	Growth	Absenteeism	ELPA
All Students	C	B	C	F
Black/Hispanic/ Native American	B	B	C	F
Economically Disadvantaged	C	C	D	
Students with Disabilities	C	A	F	
English Learners		D		F

Indicators carry different weights in determining school grades.

K-8 Schools



High Schools



Overview of A-F School Grading

- For the first time in 2017-18, all schools will receive an A-F grade.
- Schools are evaluated based on performance on various indicators.
- Most indicators provide an absolute and a growth pathway for schools to demonstrate success.
- Schools are graded on each indicator for All Students and eligible subgroups.
- Final grades are based on the performance of All Students (60%) and Subgroups (40%)

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Some Essential Terminology

Success Rate

- A **Success Rate** is the percentage of students scoring On Track or Mastered, aggregated across all subjects with 30 or more valid tests.

Subject	Valid Tests	# On Track/Mastered
Math	30	12
ELA	30	8
Science	29	10

Math and ELA have 30 or more tests, so they will count toward a success rate.

Success Rate

- A **Success Rate** is the percentage of students scoring On Track or Mastered, aggregated across all subjects with 30 or more valid tests.

Subject	Valid Tests	# On Track/Mastered
Math	30	12
ELA	30	8
Science	29	10

The success rate for this school is:

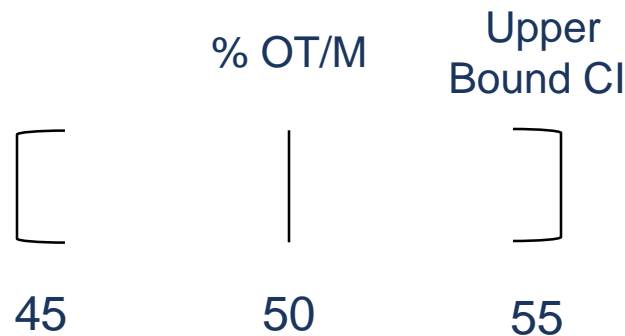
$$\frac{20}{60} = 33.3\%$$

Confidence Interval

- In statistics, a **Confidence Interval** is a range of values that, with some level of confidence, contains a parameter of interest.
- For instance, in testing students with a math test, we are trying to assess what percentage of students are **able to meet the grade level standards** for math.
- However, the percentage of students who **score On Track/Mastered** might be slightly higher (or lower) than the percentage of students whose true math ability meets grade level standards.

Confidence Interval

- Based on the percentage of students who score On Track/Mastered, we can cite a range of plausible values for the percentage of students able to meet the grade level standards.



- This is the idea of a **confidence interval**. We use the upper bound of a confidence interval in certain places in order to give schools the benefit of the doubt.

AMO Target

- An **Annual Measurable Objective (AMO) Target** establishes a benchmark for which schools are expected to progress from one year to the next.
- To meet an AMO target, schools are expected to reduce the percent of students scoring Below/Approaching by 6.25%
- Suppose a school's success rate in 2017 is 36%. Its success rate AMO target for 2018 is:

$$36 + \frac{(100 - 36)}{16} = 40\%$$

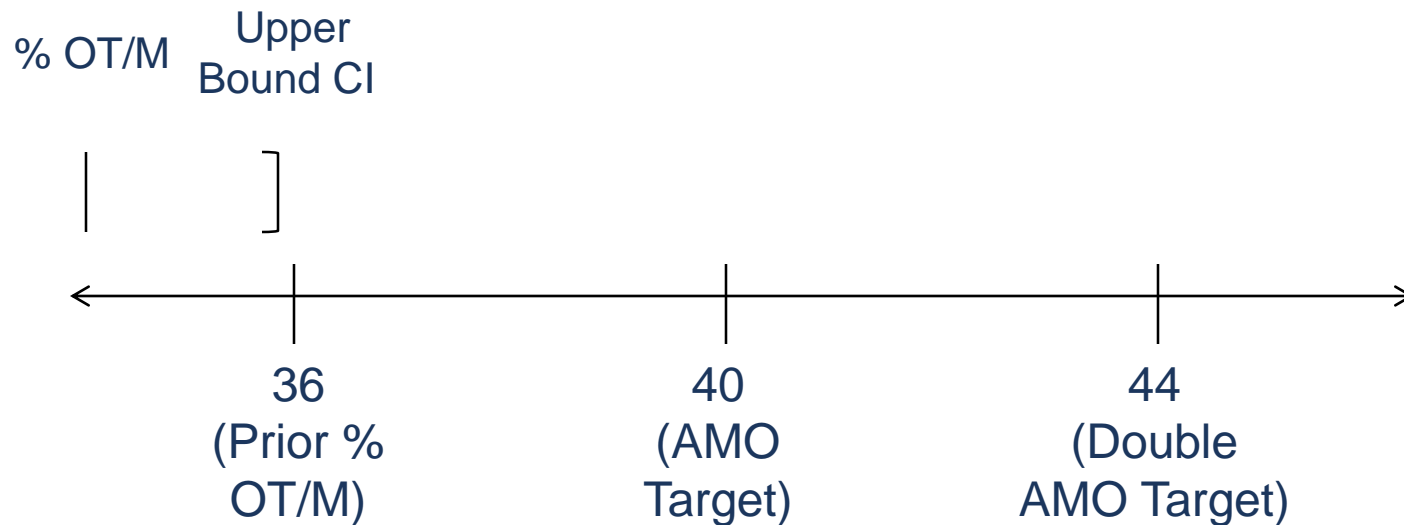
AMO Target

- TDoE also sets a double AMO target, which schools can pass in order to earn an A:

$$36 + \frac{(100 - 36)}{8} = 44\%$$

A school can perform in several ways in relation to its AMO target.

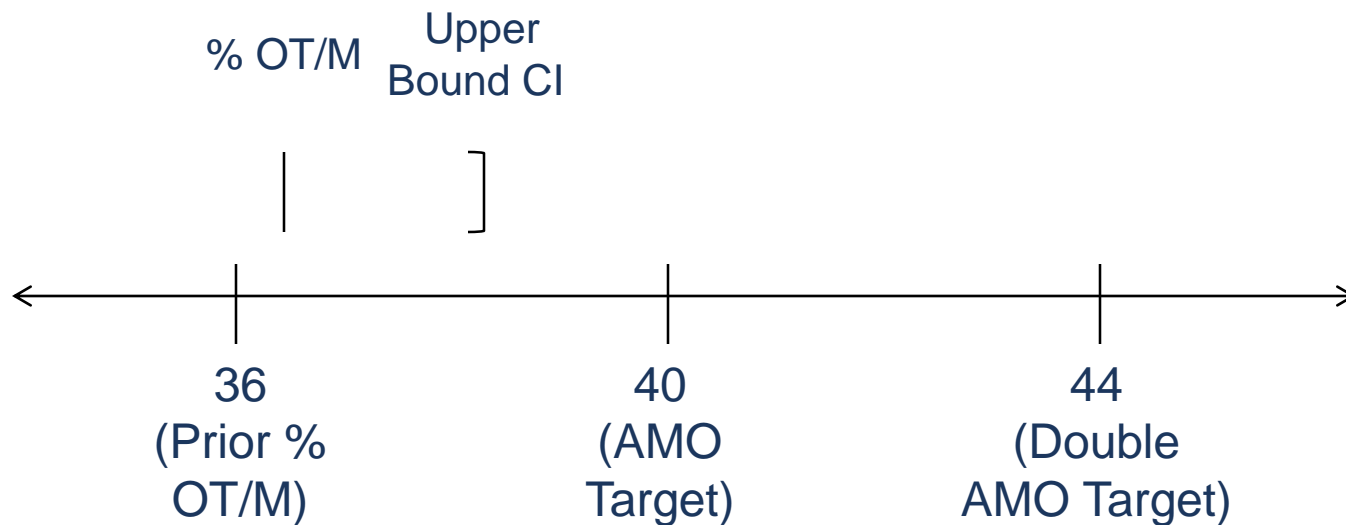
- A school can perform worse than its prior % OT/M, even considering its upper bound confidence interval:



- This earns a school an F grade via an AMO pathway.

A school can perform in several ways in relation to its AMO target.

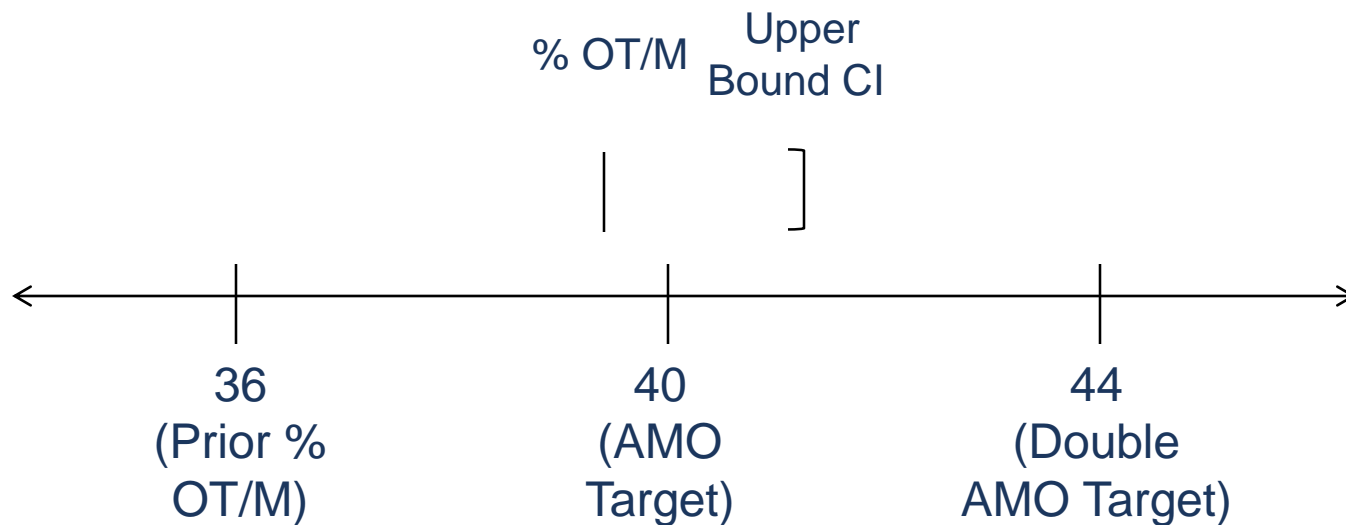
- A school can perform better than its prior % OT/M, but not meet its AMO Target:



- This earns a school a D grade via an AMO pathway.

A school can perform in several ways in relation to its AMO target.

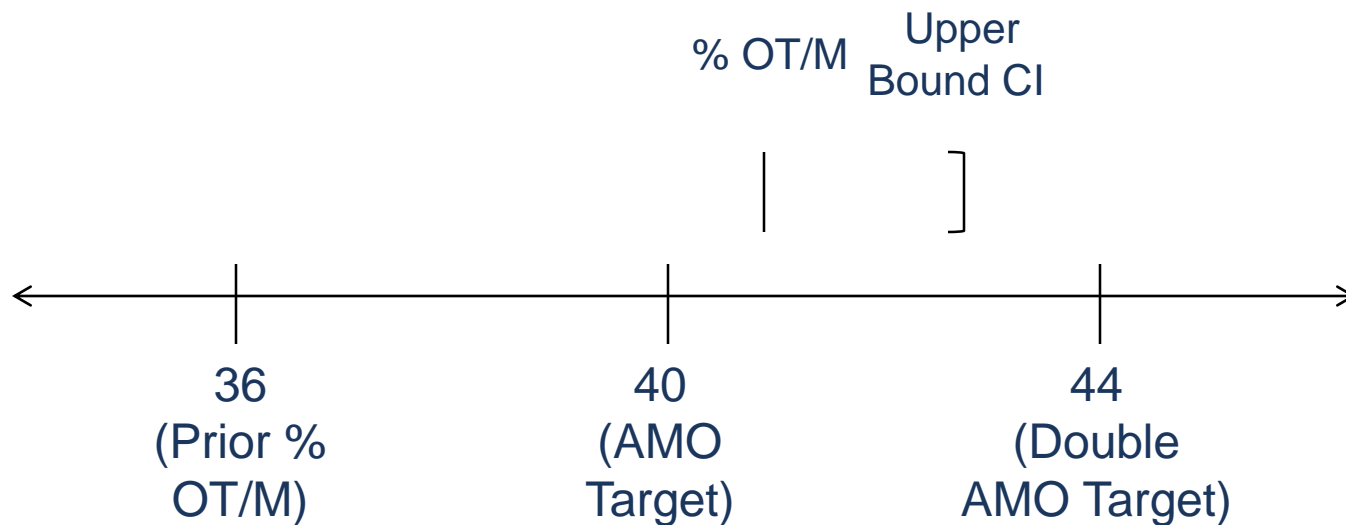
- A school can meet its AMO target with a confidence interval applied:



- This earns a school a C grade via an AMO pathway.

A school can perform in several ways in relation to its AMO target.

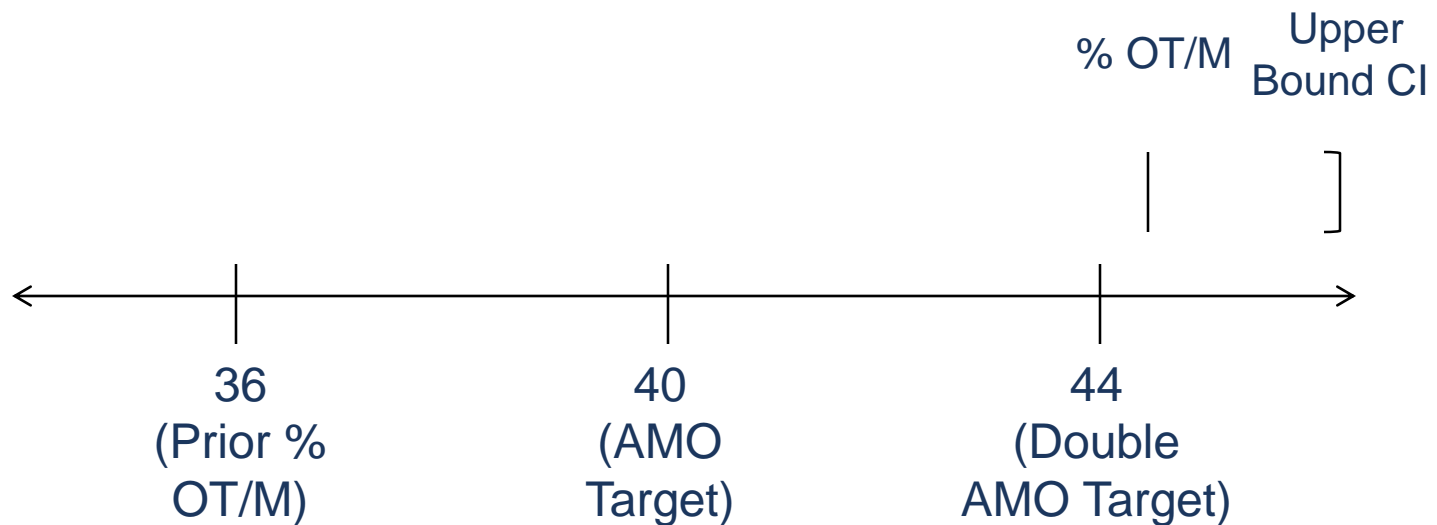
- A school can meet its AMO target outright:



- This earns a school a B grade via an AMO pathway.

A school can perform in several ways in relation to its AMO target.

- A school can meet its double AMO target outright:



- This earns a school an A grade via an AMO pathway.

Grade Pool

- Schools are placed in one of two **Grade Pools**.

School Has 30 or More Students in the Graduating Cohort	Otherwise
HS Pool	K-8 Pool

- Grade pools determine which indicators apply in school grading, and the weights that are placed on each indicator.

The logo for the Tennessee Department of Education, featuring the letters "TN" in white on a red square background, with a dark blue horizontal bar below it.

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A-F School Grading Model

F Schools

- F schools are 5 percent of schools with the lowest three-year success rates which do not earn a level 4 or 5 Composite TVAAS in the two most recent years.
- F schools are identified by pool to ensure equal representation.
- High schools with a graduation rate below 67 percent are also F schools.
- All non-F schools receive a grade based on applicable indicators.

Achievement Indicator

Grade	Success Rate	Success Rate Target
A	50 – 100%	One-Year Success Rate Exceeds Double AMO Target
B	40 – 49.9%	One-Year Success Rate Exceeds AMO Target
C	30 – 39.9%	Upper Bound of Confidence Interval Equals or Exceed AMO Target
D	20 – 29.9%	Upper Bound of Confidence Interval Exceeds Prior One-Year Success Rate
F	0 – 19.9%	Upper Bound of Confidence Interval Is Less Than or Equal to Prior One-Year Success Rate

Growth Indicator

Grade	All Students	Subgroups
A	Level 5 TVAAS	Subgroup Growth is Better than that of 80% of Schools
B	Level 4 TVAAS	Subgroup Growth is Better than that of 60% of Schools
C	Level 3 TVAAS	Subgroup Growth is Better than that of 40% of Schools
D	Level 2 TVAAS	Subgroup Growth is Better than that of 20% of Schools
F	Level 1 TVAAS	Subgroup Growth is in the Bottom 20% of Schools

Subgroup Growth

	Current Year Proficiency				
		Below	Approaching	On Track	Mastered
Prior Year Proficiency	Below				
	Approaching				
	On Track				
	Mastered				

- Subgroup growth refers to the percentage of students in a particular subgroup who improved their performance level or maintained the highest level of achievement within the same content area.

Graduation Rate Indicator

Grade	Absolute Pathway	AMO Target Pathway
A	95 – 100%	Graduation Rate Exceeds Double AMO Target
B	90 – 94.9%	Graduation Rate Exceeds AMO Target
C	80 – 89.9%	Upper Bound of Confidence Interval Equals or Exceeds AMO Target
D	67 – 79.9%	Upper Bound of Confidence Interval Exceeds Prior Graduation Rate
F	0 – 66.9%	Upper Bound of Confidence Interval is Less Than or Equal to Prior Year Graduation Rate

Ready Graduates Indicator

Grade	Absolute Pathway	AMO Target Pathway
A	50 – 100%	Ready Graduates Exceeds Double AMO Target
B	40 – 49.9%	Ready Graduates Exceeds AMO Target
C	30 – 39.9%	Upper Bound of Confidence Interval Equals or Exceeds AMO Target
D	25 – 29.9%	Upper Bound of Confidence Interval Exceeds Prior Ready Graduates
F	0 – 24.9%	Upper Bound of Confidence Interval is Less Than or Equal to Prior Year Ready Graduates

Chronically Out of School Indicator

Grade	Absolute Pathway	AMO Target Pathway
A	0 – 6% (K-8) 0 – 10% (HS)	Chronic Absenteeism is Less Than or Equal to Double AMO Target
B	6.1 – 9% (K-8) 10.1 – 14% (HS)	Chronic Absenteeism is Less Than AMO Target
C	9.1 – 13% (K-8) 14.1 – 20% (HS)	Lower Bound of Confidence Interval is Less Than or Equal to AMO Target
D	13.1 – 20% (K-8) 20.1 – 30% (HS)	Lower Bound of Confidence Interval is Less Than Prior Year Chronic Absenteeism
F	20.1 – 100% (K-8) 30.1 – 100% (HS)	Lower Bound of Confidence Interval Equals or Exceeds Prior Year Chronic Absenteeism

English Language Proficiency Assessment Indicator

Grade	Percent Meeting Differentiated Growth Standard
A	60 – 100%
B	50 – 59.9%
C	40 – 49.9%
D	25 – 39.9%
F	0 – 24.9%

Schools are graded on each indicator for All Students and eligible subgroups.

	Achievement	Growth	Graduation Rate	Ready Graduate	Absenteeism	ELPA
All Students	A	A	C	D	C	
Black/Hispanic/ Native American		B			C	
Economically Disadvantaged	B	A	D	C	D	
Students with Disabilities		A			B	
English Learners						

To calculate school grades, first convert letter grades to number values.

	Achievement	Growth	Graduation Rate	Ready Graduate	Absenteeism	ELPA
All Students	4	4	2	1	2	
Black/Hispanic/ Native American		3			2	
Economically Disadvantaged	3	4	1	2	1	
Students with Disabilities		4			3	
English Learners						

Calculate subgroup averages by multiplying points by weights.

	Achievement (30%)	Growth (25%)	Graduation Rate (5%)	Ready Graduate (20%)	Absenteeism (10%)	ELPA (10%)
All Students	4	4	2	1	2	
Black/Hispanic/ Native American		3			2	
Economically Disadvantaged	3	4	1	2	1	
Students with Disabilities		4			3	
English Learners						

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**What if indicators
are missing?**

Case 1: ELPA is Missing

	Achievement	Growth	Absenteeism	ELPA	Total Weight
Grade	A	B	C		
Weight	45%	35%	10%	10%	90%

Case 1: ELPA is Missing

	Achievement	Growth	Absenteeism	ELPA	Total Weight
Grade	A	B	C		
Weight	50%	40%	10%		100%

- Add 5% each to Achievement and Growth, assuming school has data for those indicators.

Case 2: Indicator other than ELPA is Missing

	Achievement	Growth	Grad Rate	Ready Graduate	Absenteeism	ELPA	Total Weight
Grade		A	B		C	D	
Weight	30%	25%	5%	20%	10%	10%	50%

Case 2: Indicator other than ELPA is Missing

	Achieve ment	Growth	Grad Rate	Ready Graduate	Absente eism	ELPA	Total Weight
Grade		A	B		C	D	
Weight		50%	10%		20%	20%	100%

- Scale up other indicators in equal proportion such that the total weight is 100%

Case 3: ELPA and Some Other Indicator is Missing

	Achievement	Growth	Absenteeism	ELPA	Total Weight
Grade		B	C		
Weight	45%	35%	10%	10%	45%

Case 3: ELPA and Some Other Indicator is Missing

	Achievement	Growth	Absenteeism	ELPA	Total Weight
Grade		B	C		
Weight	50%	40%	10%		50%

- First, reassign 5% each from ELPA to Achievement and Growth (if applicable).

Case 3: ELPA and Some Other Indicator is Missing

	Achievement	Growth	Absenteeism	ELPA	Total Weight
Grade		B	C		
Weight		80%	20%		100%

- Then, scale up other indicators in equal proportion such that the total weight is 100%

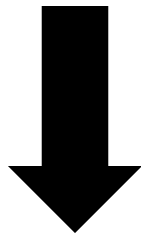
Calculate subgroup averages by multiplying points by weights.

	Achievement (30%)	Growth (25%)	Graduation Rate (5%)	Ready Graduate (20%)	Absenteeism (10%)	ELPA (10%)	Average
All Students	4	4	2	1	2		3.1
Black/Hispanic/ Native American		3			2		2.75
Economically Disadvantaged	3	4	1	2	1		2.8
Students with Disabilities		4			3		3.75
English Learners							

All Students average counts 60 percent toward a school's final grade.

All Students

3.1

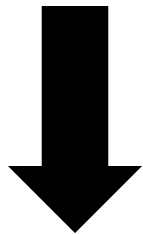


**Achievement
Average (60%)**

3.1

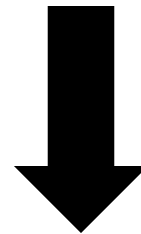
Subgroup averages count 40 percent toward a school's final grade.

All Students
3.1



Achievement Average (60%)
3.1

BHN	ED	SWD
2.75	2.8	3.75



Gap Closure Average (40%)
3.0

Combine the achievement and gap closure averages to produce a final average.

Achievement Average (60%)	+	Gap Closure Average (40%)	=	Final Average
3.1		3.0		3.1

Final averages map to A-D grades.

Final Grade	Final Average
A	3.1 – 4.0
B	2.1 – 3.0
C	1.1 – 2.0
D	0 – 1.0
F	Bottom 5% by Pool without level 4 or 5 TVAAS in two most recent years

School Grading Modeling Tool

- We have a tool which allows users to enter their data and estimate a school grade.
- <https://tnedu.shinyapps.io/school-grading>

Questions?

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