Arizona's School Accountability System

Technical Manual

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Volume I: Arizona LEARNS Achievement Profiles

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Published by the Arizona Department of Education, April 2006.

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1. Introduction

In November of 2001, Arizona voters approved Proposition 301 that, among other things, provided funds to the Arizona Department of Education (ADE) to develop "a system to measure school performance based on student achievement, including student performance on the AIMS test." The legislative requirements for the accountability system are stated in section 15-241 (ARS § 15-241) of the Arizona Revised Statutes. The accountability system created to satisfy the statute is referred to as the Arizona LEARNS. The school evaluation given by ADE to each school is referred to as the school's achievement profile. This manual describes the method used to generate the 2005 achievement profiles. It provides formulas, parameters, and business rules that make up the profile calculation. It also describes the AZ LEARNS process for 2005. Its intent is to document and explain the methods used and justify the policies adopted. This manual will give the ambitious user all the information required to calculate the achievement profile of his or her school.

What's New for the 2005 AZ LEARNS Achievement Profiles

When developing modifications to the method of calculating school achievement profiles for 2005, the ADE, as in previous years, consulted with its Advisory Group—a diverse group ranging from measurement experts, curriculum coordinators to Principals. These experts volunteered their time to undertake the difficult task of advising the department on the complex issue of state-level school accountability.

For 2005, there were some changes that were implemented to the AZ LEARNS system.

- **Change baseline to Status measure -** Instead of giving schools points based on the percentage of students passing in the baseline years, schools will be awarded points based on the percentage of students passing in the current year.
- Modify criteria for Highly Performing and Excelling schools – Instead of using the percent exceeding for the past three years, Z scores were calculated and best of 3 year average or current year was used to identify Highly Performing and Excelling Schools.
- **A new designation of Performing Plus** – The Performing Plus status will be given to schools that have enough points to be Highly Performing or excelling, but do not have sufficient students exceeding the standard.
- Modified evaluation of small schools - Small school calculations were eliminated. Instead, all groups less than 16 will be given a second look confidence interval if the school is Underperforming.
- Every school gets a profile – In 2005, every school will get a profile in the first year of operation.
- Grades 4, 6 and 7 were included in the profiles – All grades tested will be included in the calculations.

- ELL Rule change for high school – ELL students who were not in a program for three or more years will not be included in the calculations
- New measure for Map – A new measure will be developed comparing SAT 9 scores from 2004 and AIMS scores from 2005
- The cut points changed – status, growth, and percent exceeding- The cut points will be reset in 2005 because the test changed.
- Ceiling Effect – A status group of 6 gets 100% of the weight to correct for the ceiling effect. For subject/grade combinations where the school has achieved the highest possible status points (6), 100 percent of the weight will be placed on the status points earned and zero weight will be placed on the growth points earned.

2. State Board Approval of AZ LEARNS Achievement Profile Methodology

The Arizona State Board of Education reviewed, commented upon, and approved changes in the AZ LEARNS achievement profile methodology. The ADE provided the Board information packets that outlined the decisions regarding the formula that needed to be made. This documentation can be found online via the AZ LEARNS web site, http://www.ade.az.gov/azlearns.

In 2005 the following actions were taken by the Board with respect to AZ LEARNS:

- On August 23rd 2005, the state board approved the new thresholds for AIMS scale points, the new thresholds for the Z scores, and the change from using the baseline to status.

- On December 5th 2005, the State Board approved the change in the formula to correct for ceiling effect by placing 100% weight for status group 6. For subject/grade combinations where the school has achieved the highest possible status points (6), 100 percent of the weight will be placed on the status points earned and 0 weight will be placed on the growth points earned.

3. Overview of the AZ LEARNS Evaluation System

This section provides an overview of how AZ LEARNS achievement profiles are determined. More detailed discussions of the methodology used to determine the profiles, including descriptions of equations, algorithms, and data used are given in subsequent chapters.

Arizona law (ARS § 15-241) mandates that the Arizona Department of Education shall compile an annual achievement profile for each public school. It specifies that the profiles of schools serving grades K-8 shall be based on:

- Arizona Measure of Academic Progress (MAP).
- Percent of students who pass AIMS.

It specifies that the profiles of high schools shall be based on:

- Drop out rate
- Graduation rate
- Percent of students who pass AIMS.

A school that serves both grades K-8 and high school receives two separate achievement profiles.

The law also calls for the ADE to use a research based methodology that shall:

- Include performance of pupils at all achievement levels
- Account for pupil mobility
- Account for the distribution of pupil achievement
- Include longitudinal indicators of academic performance.

A research based methodology is defined as "the systematic and objective application of statistical and quantitative research principles to determine a standard measurement of acceptable academic progress for each school".

The law also calls for a system of parallel achievement profiles for accommodation schools/alternative schools as defined by the Board of Education.

General Process to Calculate an Achievement Profile

The achievement profile for a school serving grades 3-8 consists of the following performance measures:

1. Status - Measures the performance of students on all three sections of the AIMS (reading, writing, and mathematics) in the current year.

2. A measure of improvement in aggregate student performance on the AIMS compared to the baseline year (2003).

3. A measure of growth in individual student performance using the Stanford 9 (SAT-9) and the AIMS test. This is the Measure of Academic Progress (MAP).

4. A measure of whether the school made Adequate Yearly Progress (AYP) as defined by the No Child Left Behind Act of 2001. In order to comply with federal requirement that the state have an integrated accountability system, a school's AYP determination is factored into the calculation of its achievement profile.

5. In order to create the incentive for schools to improve the achievement of average and above-average students, a school cannot earn the Highly Performing or excelling labels unless the percentage of its students exceeding the standard on AIMS met specific thresholds. The data used is the best of three-year average or the current year.

6. The achievement profile for a high school is made up of all of the above components except for measure 3. In addition, the following performance measures are used for high schools:

    - Dropout rate.

    - Graduation rate.

Schools are awarded scale score points based on their performance on measures 1-4, 6, and 7. Scale score points are then summed up for each school and compared to a scale that relates scale score points to the five profile labels: excelling, Highly Performing, Performing Plus, Performing, and Underperforming. Performance measure five is then examined to determine if the school has earned the highest labels of Highly Performing or excelling.

Principles Behind the Use of Test Scores to Measure School Performance

The Arizona Instrument to Measure Standards (AIMS) is a criterion-referenced test used by the state of Arizona to measure student performance in the areas of math, reading and writing. In each subject area, students are grouped into performance categories based on how they performed relative to the state standard:

- Falls Far Below the Standard (FFB)

- Approaches the Standard (A)
- Meets the Standard (M)
- Exceeds the Standard (E)

A student is deemed to have passed the test if he or she scores at meets or exceeds. The AIMS portion of the achievement profile carries an expectation that students will meet the state standards. For this reason, a year-to-year analysis of the percentage of students that fall far below the standard and meet or exceed the standard is used for determining a school classification.

The AIMS provides a measure of how well students have learned Arizona's academic standards. The MAP provides a longitudinal view of individual student progress across all grade levels. These indicators ensure that all grade levels in an elementary school share in the responsibility of moving all students forward.

Student groups vary from year to year and their performance will fluctuate from one year to the next, regardless of schooling effects. This phenomenon is known as a cohort effect. A three-year rolling average captures trends, rather than aberrations, and to account for differences in student cohorts. It also mitigates these cohort effects and increases the reliability of the results. Furthermore, multiple years allow for the identification of real trends in school performance. A downward bump may be attributed to cohort effects, but a downward trend (continuous bumps) is an indication of lagging performance.

4. Data Correction and Timeline

Districts and charter holders are solely responsible for submitting the data necessary for calculating achievement profiles for their schools and for ensuring its accuracy. Because of the stakes involved and the volume and scope of the data used, the ADE considered it prudent to allow districts and charter holders to review their data before preliminary AZ LEARNS achievement profiles calculations were carried out.

From June 22, 2005, through October 7th, 2005 an application to verify data was made available to districts and charter holders through the common logon on the ADE web site. The primary purpose of the application was to allow districts and charter holders to review the demographic information for individual students. . In addition, a link was provided through the common logon that allowed schools to download student-level testing data in order to make any necessary corrections. Some of the information could be corrected using the data correction application and all other information had to be changed in SAIS. Schools also had the opportunity to correct data up through the close of the appeals window on October 3rd, 2005.

Timeline

The timeline for AZ LEARNS Achievement Profile process was:

- June 22, 2005. Opening of data verification process.
- August 23, 2005. Opening of application process for alternative schools.
- September 9, 2005. Closing of application process for alternative schools.
- September 23, 2005. Preliminary release of AZ LEARNS achievement profiles for all schools Opening of window for appeals submissions.
- October 3rd, 2005. Closing of appeals window for all schools.
- October 14, 2005. Public release of AZ LEARNS achievement profiles for all schools.

5. Calculation of AIMS Status and Growth Scale Points

In the AZ LEARNS profile, schools are awarded scale score points based on student performance on the AIMS. Points are determined by performance in the current year, and improvement in student performance from the baseline year (2003). If the school opened in 2004, the school was evaluated using the current year data (2005)

Identifying Status Groups

Equation Used to Calculate Status Scores

The following method is used to calculate Status points for every subject and grade offered by a school. First, calculate the percent passing in the current year. The percentage is compared to a scale which in turn gives the status points achieved for the subject and grade.

$$\text{Percent Passing in the current year} = \frac{\#\,\text{Students Passing AIMS in the current year}}{\#\,\text{Students tested in the current year}}$$

The points are rounded to the nearest hundredth e.g. .675 = .68; .672 = .67.

Data Used

A student's score is excluded from the calculation if any of the following criteria are met:

1. Student received no score on the test.
2. Student was not English proficient. A student was considered not proficient if he/she indicated on the AIMS test sheet that he/she was an English learner AND the student was classified as an English learner for three years or less.
3. The student received a non-standard modification on the test which changed the validity of the results.
4. The student tested out of level.
5. The student did not start the year at the school (Startyr = N).
6. The calculation for high schools includes all students in grades 10 through 12 who have taken the AIMS.

Status Groups							
Grade	Subject	Status Group 1	Status Group 2	Status Group 3	Status Group 4	Status Group 5	Status Group 6
3	Math	<51%	51-64%	65-78%	79-88%	89-94%	>=95%
3	Read	<46	46-59	60-73	74-84	85-92	>=93
3	Writ	<56	56-67	68-78	79-87	88-93	>=94
4	Math	<46	46-60	61-75	76-86	87-93	>=94
4	Read	<40	40-53	54-69	70-81	82-90	>=91

4	Writ	<42	42-53	54-65	66-77	78-85	>=86
5	Math	<42	42-56	57-72	73-85	86-92	>=93
5	Read	<42	42-56	57-73	73-84	85-92	>=93
5	Writ	<47	47-57	58-69	70-80	81-87	>=88
6	Math	<34	34-49	50-66	67-81	82-90	>=91
6	Read	<38	38-52	53-69	70-82	83-91	>=92
6	Writ	<49	49-60	61-73	74-83	84-90	>=91
7	Math	<35	35-49	50-66	67-81	82-90	>=91
7	Read	<41	41-54	55-69	70-82	83-90	>=91
7	Writ	<64	64-73	74-82	83-89	90-94	>=95
8	Math	<27	27-41	42-59	60-76	77-87	>=88
8	Read	<35	35-48	49-65	66-79	80-88	>=89
8	Writ	<58	58-70	71-82	83-90	91-95	>=96
HS	Math	<5	5-13	14-29	30-51	52-70	>=71
HS	Read	<16	16-28	29-46	47-65	66-79	>=80
HS	Writ	<18	18-30	31-48	49-67	68-80	>=81

A school is awarded status points for each subject/grade it offers. The number of points awarded for each subject/grade is equal to that subject/grade's Status grouping.

Example. In the current year, 66 percent of the students in Gila Monster Elementary passed the math portion of the third grade AIMS. This value places the subject/grade in Status grouping three. Gila Monster Elementary has earned three status points for this particular subject/grade.

Identifying Growth Groups

Determining a school's growth points for each subject/grade combination is based on student movement out of the falls far below (FFB) category and student movement into the meet/exceeds (M/E) category. The growth points earned are determined by the difference between average percentages in 2004 and 2005 and the baseline percentage (2003). The ADE considers a school to have made positive change if the two-year average percent of students that fall into the M/E category is higher than the baseline percentage or if the two-year average percent FFB is lower than the baseline. The ADE considers a school to have made negative change if the two-year average percentage of students in the M/E category is lower than the baseline or if the percentage of students in the FFB category is higher than the baseline percentage. The ADE expects schools to increase the percentage of students that meet the standards over time, and decrease the percentage that fall far below the standards over time.

Equations Used to Calculate Growth Points

Growth points for a subject/grade are calculated in the following seven steps.

Equation 1

$$\text{Baseline FFB} = \frac{\#\,\text{Students FFB in baseline years}}{\#\,\text{Tested in baseline years}}$$

Equation 2

$$\text{Baseline M/E} = \frac{\#\text{ Students M/E in baseline years}}{\#\text{ Tested in baseline years}}$$

Equation 3

$$\text{2 - Yr. Avg. FFB} = \frac{\#\text{ Students FFB in most recent two years}}{\#\text{ Tested in most recent two years}}$$

Equation 4

$$\text{2 - Yr. Avg. M/E} = \frac{\#\text{ Students M/E in most recent two years}}{\#\text{ Tested in most recent two years}}$$

Equation 5

$$\text{Change FFB} = \text{2 - Yr. Avg. FFB - Baseline FFB}$$

Equation 6

$$\text{Change M/E} = \text{2 - Yr. Avg. M/E - Baseline M/E}$$

Equation 7

$$\text{Growth Points} = \text{Change M/E - Change FFB}$$

All values are rounded to the nearest ten-thousandth e.g. .67556 = .6756; .67221 = .6722.

Data Used

A student's score is excluded from the growth point calculation if any of the following criteria are met:

- Student received no score on the test.
- Student was not English proficient. A student was considered not proficient if he/she was an English learner AND the student was classified as an English learner for three years or less. Students were included in the calculation of achievement profiles for high schools regardless of English proficiency for data until 2004. In 2005, the same criteria was applied to all grades.
- The student received a nonstandard modification on the test.
- The student tested out of level.

- The student did not start the year at the school (Startyr = N).

The growth calculation for high schools includes all students in grades ten through twelve who have taken the AIMS.

Example. The following example demonstrates how growth points are calculated. Table 5.2 shows three years of AIMS scores for a single subject and grade for a hypothetical school.

Table 5.1. Number of Students

Year	FFB	A	M	E	Total
2003	15	35	30	30	110
2004	10	35	30	35	110
2005	10	25	35	40	110

The following equations show the steps used to calculate the growth points given the test scores in the above table.

Equation 1

$$\text{Baseline FFB} = \frac{15}{110} = 0.1364$$

Equation 2

$$\text{Baseline M/E} = \frac{60}{110} = 0.5455$$

Equation 3

$$\text{2 - Yr. Avg. FFB} = \frac{10+10}{110+110} = 0.0909$$

Equation 4

$$\text{2 - Yr. Avg. M/E} = \frac{65+75}{110+110} = 0.6364$$

Equation 5

$$\text{Change FFB} = 0.0909 - 0.1364 = -0.0455$$

Equation 6

$$\text{Change M/E} = 0.6364 - 0.5455 = 0.0909$$

Equation 7

$$\text{Growth Points} = 0.0909 - (-0.0455) = 0.1364$$

The growth group cut points are given in table 5.3. Please refer to the technical manual for the 2003 profiles (release date February 17, 2004) for a description of how the cut points were established.

Grade	Subject	Growth Group 1	Growth Group 2	Growth Group 3	Growth Group 4	Growth Group 5	Growth Group 6
3	Math	<-15%	-15 - -5	-6 - 1%	2 - 9%	10 - 17%	>18%
3	Read	<-20	-20 - -12	-13 - -5	-6 – 0	1 – 8	>9
3	Writ	<-13	-13 - -3	-4 – 3	4 -12	13 – 21	>22
5	Math	<-08	-8 – 0	1 – 8	9 -18	18 – 25	>26
5	Read	<-10	-10 - -1	-2 – 5	6 – 13	14 – 22	>23
5	Writ	<00	0 – 9	10 – 20	21 – 31	32 – 41	>42
8	Math	<18	18 – 26	27 – 35	36 – 44	45 – 53	>54
8	Read	<-11	-11 - -1	-2 – 7	8 – 16	17 – 25	>26
8	Writ	<17	17 - -27	28 – 38	39 – 49	50 – 60	>61
HS	Math	<06	6 – 13	14 – 21	22 – 29	30 – 37	>38
HS	Read	<-16	-16 - -5	-6 – 3	4 – 12	13 – 22	>23
HS	Writ	<-24	-24 - -12	-13 - -2	-3 - 7	8 - 18	>19

Calculation of Subject/Grade Scale Points from AIMS

The total scale score points derived from AIMS performance are calculated by adding the baseline points awarded to the growth points awarded. A 70 percent weight is given to the school's strongest scale value (baseline group or growth point group) and a 30 percent weight to the other scale value. Table 5.4 shows the scale points earned per subject/grade for all combinations of baseline and growth group scale points.

Example. In third grade mathematics, Gila Monster Elementary has earned three status points and four growth group scale points. Because it has earned more scale points for its growth group, the growth group points are given a 70 percent weight and the status group scale points are given a 30 percent weight. Thus, the total scale points earned for third grade math are (.7 X 4) + (.3 X 3) = 3.7.

Example. In mathematics, Desert Mountain Vista High School has earned five status group scale points and two growth group scale points. Because it has earned more scale points for its status group, the status scale points are given a 70 percent weight and the baseline group scale points are given a 30 percent weight. Thus, the total scale points earned for third grade math are (.3 X 2) + (.7 X 5) = 4.1.

If a school got a status group of 6, 100% of the weight is given to the status group. If the school is missing data in the baseline year or any other year used in the calculations the school gets only status points and 100% of the weight is given to status points.

The total scale score points derived from AIMS for all subject/grade combinations for a school are summed and added to the scale score values for other performance measures.

Table 5.2. AIMS Scale- Point Distributions by Baseline Grouping and Growth Point Grouping

	Growth Point Grouping 1	Growth Point Grouping 2	Growth Point Grouping 3	Growth Point Grouping 4	Growth Point Grouping 5	Growth Point Grouping 6
Status Grouping 1	1.0	1.7	2.4	3.1	3.8	4.5
Status Grouping 2	1.7	2.0	2.7	3.4	4.1	4.8
Status Grouping 3	2.4	2.7	3.0	3.7	4.4	5.1
Status Grouping 4	3.1	3.4	3.7	4.0	4.7	5.4
Status Grouping 5	3.8	4.1	4.4	4.7	5.0	5.7
Status Grouping 6	4.5	4.8	5.1	5.4	5.7	6.0

Special Cases: New Schools, and Missing Data

If a school is missing AIMS test data for a subject/grade combination it offers, it receives zero scale points for that subject/grade for the achievement profile calculation for the test year in which the data are missing.

> If a school is missing one year of data used in any of the three-years (2003 – 2005), the school gets only status points. New schools only receive status points. In order for a school to get both status and growth points the school should have 16 usable test scores in all years. If the school does not have 16 usable scores in 2003 or 2004, the school received only status points. If the school had less than 16 usable scores in the current year and if the school received an Underperforming label, a second look 95 % confidence interval is applied.

Example. Gila Monster Elementary is missing data for fifth grade writing for both 2003 and 2004. Its status points for that subject/grade combination put it in status group five. 100% weight is given to the Status group in this case. Thus it receives 5 AIMS scale points for fifth grade writing.

Because of the high-stakes consequences of being labeled an Underperforming school, and because of the uncertainty of measurement involved with small sample sizes, it is prudent to give extremely small schools a "second look" if they face the possibility of receiving an Underperforming label. If the preliminary label of a small school (less than 16 usable test scores) is Underperforming, then the AIMS scale score points for that school are recalculated. For each subject/grade combination, the upper bound of the 95-percent confidence interval is used to calculate to which baseline group the school belongs. If the recalculated points move the school into a higher classification, the school receives a Performing label.

Let p=the percent of students in a group passing the AIMS and n=the number of students in the group. Then the equation for the upper bound of the 95 percent confidence interval (UB95) is:

$$UB99 = p + 1.96\sqrt{p(1-p)/n}.$$

As can be seen from the equation, the confidence interval depends upon the percent of students who passed the test, and the number of students tested. Thus, the confidence interval will differ among grades, subjects, and schools.

The equation is an approximation of the confidence interval for a binomially distributed variable. It uses the standard normal distribution and is sufficiently accurate if the group size and percentage of students passing are large enough. For small values of n and small p, a more accurate estimate of the confidence interval is made using statistical tables that provide

confidence intervals for a binomially distributed variable.[1] The tables are applied using the rules given in table 5.3.

Table 5.3. Rules for Determining UB95 for Small n and p.

If n>=0 and n < 8, and
p>= 0 and p <.04, then
UB95=.42;
p>=.04 and p <.10, then
UB95=.50;
p>=.10 and p <.20, then
UB95=.60;

If n>=8 and n < 10, and
p>= 0 and p <.04, then
UB95=.37;
p>=.04 and p <.10, then
UB95=.45;
p>=.10 and p <.20, then
UB95=.55;

If n>=10 and n < 12, and
p>= 0 and p <.04, then
UB95=.33;
p>=.04 and p <.10, then
UB95=.41;
p>=.10 and p <.20, then
UB95=.52;

If n>=12 and n < 16, and
p>= 0 and p <.04, then
UB95=.27;
p>=.04 and p <.10, then
UB95=.35;
p>=.10 and p <.20, then
UB95=.47;

If n>=16 and n < 20, and
p>= 0 and p <.04, then
UB95=.24;
p>=.04 and p <.10, then
UB95=.32;
p>=.10 and p <.20, then
UB95=.44;

If n>=20 and n < 24, and
p>= 0 and p <.04, then
UB95=.21;
p>=.04 and p <.10, then
UB95=.29;
p>=.10 and p <.20, then
UB95=.42;

If n>=24 and n < 30, and
p>= 0 and p <.04, then
UB95=.18;
p>=.04 and p <.10, then
UB95=.27;
p>=.10 and p <.20, then
UB95=.38;

If n>=30 and n < 40, and
p>= 0 and p <.04, then
UB95=.15;
p>=.04 and p <.10, then
UB95=.23;
p>=.10 and p <.20, then
UB95=.36;

[1] Mansfield, Edwin. 1991. *Statistics for Business and Economics, 4th Edition.* New York: W.W. Norton and Company. 280-284.

6. Added Evidence: Measure of Academic Progress

OVERVIEW

The added evidence portion of an elementary school profile uses the Arizona Measure of Academic Progress (MAP). In previous years, the MAP used the Stanford 9 (SAT-9) test scores for individual students matched longitudinally through time to provide a measure of student academic growth. In 2005, because of the change in testing companies, ADE discontinued administering the Stanford 9. Instead norm-referenced scores for students were determined using the AIMS DPA. The scores were based on the scale for the TerraNova test.

CTB, the new testing contractor for Arizona, conducted a study to link the scores of the new test to the Stanford 9. The study advised that it was inappropriate to use its results to convert the scores of individual students from the scale of one test to another. Hence, it was impossible to calculate MAP for schools using the method of previous years.

Both the state and national advisory committees recommend that, as a transition measure, the MAP for the 2005 AZ LEARNS profiles be calculated by comparing student performance on the 2004 Stanford 9 to the 2005 AIMS using the following method:

1. Individual student 2004 SAT-9 scale scores for reading and math were converted to normal curve equivalent scores using the mean and standard deviation for the state. Thus, norm-referenced scores were created for each student against state norms.

2. Individual student 2005 AIMS scale scores for reading and math were converted to normal curve equivalent scores using the mean and standard deviation for the state. Thus, norm-referenced scores were created for each student against state norms.

3. The scores for individual students for each subject were matched from 2004 to 2005, and the difference in normal curve equivalent scores between the two years was determined. If the difference was greater or equal to zero, the student was considered to have made one year's growth in that subject.

As with the former MAP calculation, the percent of students making one year's growth was determined for each school. Schools were awarded points based on the scale shown in table 6.1. A three year average was not used.

Table 6.1 Number of MAP Points Earned	
% Making One-Year's Growth	Points earned
75-100	8
50-74	6
25-49	4
0-24	2

To ease the transition to a new MAP calculation, schools received the best of either the MAP points earned for the 2004 profile (adjusted to the 2005 scale) or the points earned using the above method.

The adjustment to the 2005 scale was done by taking the percentage of students making one year's growth in a school's 2004 profile (which was an average of 2004, 2003 and 2002), and comparing it to the scale below used for previous years' profiles.

Table 6.2. Number of MAP Points	
% Making One-Year's Growth	Points earned
90+	8
80- 89	6
70-79	4
60-69	2
<60	0

Example. Gila Monster Elementary had 74 percent of it students make one year's growth in 2004. By table 6.2, this would earn it four points. Gila Monster Elementary had 56 percent of its students make one year's growth in 2005. By table 6.1, this would earn it six points. Gila Monster Elementary is awarded six points for its 2005 AZ LEARNS profile.

7. Graduation and Dropout Rates

Overview

The graduation and dropout rates are important complements to the high school model used in the revised achievement profiles. Graduation rates indicate the success of students in meeting course requirements and achieving passing grades in subject areas not covered by the AIMS test. Dropout rates are included in the high school model as a measure of student persistence and to ensure that AIMS results reflect the largest percentage of the student population possible.

Graduation and dropout rates are used solely in the calculation of a high school profile. High school status was granted to any school that reported data in grade ten for each of the relevant school years.

In the calculation of a high school achievement profile, the two rates operate independently of one another; in other words, the point value outcome is a reflection of how the school performs in each of the categories. When one of the pieces of data is missing, a school cannot meet the target for that category.

The rounding of dropout and graduation rate percentages worked in such a way that the decimal was only taken out to four places, regardless of the value of the fifth. In other words, the percentages, expressed at this point as decimals, were divided by 1000, then rounded based on one decimal place, such that 0.5 percent was rounded up and 0.4 percent was rounded down. Lastly, the number was divided by 10 to produce a percentage and one decimal place.

For example, if, in 2000, a school reported a total enrollment of 90 and a dropout count of 25, this translates into a baseline dropout rate of 0.27777778. To round this into a percent, the calculation divided this number by 1000, which equals 277.7, then rounded to 278, then divided by 10: 27.8 percent. The final percent is compared to the cutoff points in each category.

Graduation Rates

The Graduation Rate is a five-year, longitudinal measure of how many students graduate from high school. By examining a cohort of students who began high school at the same time, the graduation rate assesses how many students actually complete high school within a five-year period (see figure 7.1).

Figure 7.1. Graduation Rate Calculation

$$\text{Graduation Rate} = \frac{\text{Number of Cohort members who graduated after five years}}{\text{Original Cohort Membership} + \text{Transfers In} - \text{Transfers Out} - \text{Deceased}} \times 100$$

For graduation rate data, four years of data were used:

Graduation rate for the cohort class of 2000, which represents the baseline rate and is used as a reference point in order to measure increases from year to year

-and-

A three-year average of the cohort classes of 2003, 2004 and 2005. The three-year average is calculated by taking the total number of combined five year graduates and dividing by the total number of students in the combined cohort classes (see figure 7.2).

Figure 7.2. Calculating a Three Year Average for Graduation Rate

$$\text{3 Year Average} = \frac{\text{2003 + 2004 + 2005 5 Year Graduates}}{\text{Combined number of students in three cohorts}} \text{ X 100}$$

Cut points for the graduation rate portion of the profile were determined by examining a distribution of school graduation rates in Arizona and comparing them to the state mean. After analyzing the state distribution of scores and the guidelines in the achievement profile legislation, the following rates were targeted as cut-point values for graduation rate:

73.5 percent: The state mean when school size is controlled for by averaging the rates of all schools in Arizona.

89.5 percent: As stated in A.R.S.§15-241, the highest cut-point for a 5-year graduation rate is at least 90 percent.

In order for a school to meet the target for their 5-year graduation rate achievements, incremental gains must be made from one year to the next. These gains are evaluated by comparing the three-year average rate to the baseline rate (see table 7.1). A school can meet the target for graduation rate in multiple ways, depending upon the value of its three-year average rate:

- If the three-year average is 89.5 percent or greater, the target is automatically met.
- If the three-year average is less than 89.5 percent, the baseline rate is used as a reference point and incremental gains must be made from year to year. The gains required to meet the target were derived from the statewide distribution of graduation rates.
- If the baseline rate is greater than or equal to 73.5 percent, the difference between the three-year average and the baseline rate must be greater than or equal to 0.5 percent.

- If the baseline rate is less than 73.5 percent, the difference between the three-year average and the baseline rate must be greater than or equal to 1.5 percent.

Dropout Rates

The Dropout Rate is an annual measure of how many students drop out of a school during a twelve-month reporting period. It is expressed as the proportion of students who dropped out during the year to the total number of students that enrolled in the school over the course of the year (see figure 7.3). The state of Arizona defines a dropout as a student who was enrolled in a school at any point during the year, was not enrolled at the end of the year and did **not**:

Graduate or complete high school

-or-

Transfer to another qualified educational facility

-or-

Die

Figure 7.3. Calculating an Annual Dropout Rate

$$\text{Dropout Rate} = \frac{\text{Number of students who dropped out}}{\text{Number of students who were enrolled during the school year}} \times 100$$

For dropout rate data, two values were used:

- Dropout rate for the 2001 school year, which represents the baseline rate and was used as a reference point in order to measure increases from year to year

-and-

- A three-year average of the 2002, 2003, and 2004 school years. The three-year average is calculated by taking the total number of combined dropouts and dividing by the total number of combined students served (see figure 7.4).

Figure 7.4. Calculating a Three-Year Average for Dropout Rate

$$\text{3 Year Average} = \frac{\text{Total number of students who dropped out in 3 years}}{\text{Total number of students who were enrolled during 3 years}} \times 100$$

Table 7.1. Target Improvements for Dropout and Graduation Rates in the High School Achievement Profile

Baseline Dropout Rate	Target**	Baseline Graduation Rate	Target**
< or = 9.4%	0.5% Decrease	> or = 73.5%	0.5% Increase
> 9.4%	1.5% Decrease	< 73.5%	1.5% Increase

**Meeting the target is assessed by calculating the difference between the average rate and the baseline rate. Recall that, for the annual dropout rate, a three-year average is used and for the graduation rate, a two-year average is used.

Cut points for the drop out rate portion of the profile were determined by looking at a distribution of school dropout rates in Arizona and comparing them to the state mean. After analyzing the state distribution of scores and the guidelines in the legislation, the following rates were targeted as cut-point values for dropout rate:

- **9.4 percent:** The state mean when school size is controlled for by averaging the rates of all schools in Arizona.

- **6.0 percent:** As stated in A.R.S.§15-241, the lowest cut-point for dropout rate is less than 6 percent.

In order for a school to meet the target for their annual dropout rate achievements, incremental decreases must be made from one year to the next. These decreases are evaluated by comparing the three-year average rate to the baseline rate (see table 7.1).
A school can meet the target for dropout rate in multiple ways, depending upon what the three-year average rate is:

- If the three-year average for the annual dropout rate is 6.0 percent or less, the target is automatically met.

- If the three-year average is greater than 6.0 percent, the baseline rate is used as a reference point and incremental gains must be made from year to year. The gains required to meet the target were derived from the statewide distribution of dropout rates.

- If the baseline rate is less than or equal to 9.4 percent, the difference between the three-year average and the baseline rate must be greater than or equal to 0.5 percent.

- If the baseline rate is greater than 9.4 percent, the difference between the three-year average and the baseline rate must be greater than or equal to 1.5 percent.

A total of two points is awarded for the combination of dropout and graduation rate portion of an achievement profile. If both targets are met, two points are awarded; if one of the

targets is met, one point is given. If neither of the targets is met, no points are awarded. The target could not be met if data were missing in a category.

Table 7.2. Point Value Outcomes

	Point Value
Graduation and Dropout Targets Met	2
Graduation or Dropout Target Met	1
Neither Graduation or Dropout Target Met	0

8. Evaluating the Total Scale Score Value to Determine a School Classification

The tables below show the total number of scale score points that schools must earn in order to receive a given classification. A school may receive up to 6 AIMS scale points for each of its subject/grade combinations that are evaluated; up to 8 added evidence scale points if it is an elementary or middle school; and up to two graduation/drop out scale points if it is a high school. A school receives one scale point if it made adequate yearly progress (AYP).

For each school, the applicable scale score cut points for classification labels are calculated by averaging the AIMS Scale points received for all subjects and grades evaluated and then adding the AYP point received and the MAP if it is an elementary school, Graduation/dropout rate if it is a high school. The classification cut points for elementary schools are given in the first column of table 8.1 and those for high schools are given in the first column of table 8.2. In order for schools to be classified as Highly Performing or Excelling, there is an additional Z score criteria that has to be met, which is explained in the next chapter.

Table 8.1. Elementary School Classification Cut points

	Performance Thresholds	
Profile	***Scale Points***	***z-score***
Underperforming	<13	
Performing	13-15.9	NA
Performing Plus	16 or more	NA
Highly Performing	16-18.9	< 0.45
Excelling	19 or more	0.45 or more

Table 8.2 High School Classification Cut Points		
	Performance Thresholds	
Profile	***Scale Points***	***z-score***
Underperforming	<9.6	
Performing	9.6-14.9	NA
Performing Plus	15 or more	NA
Highly Performing	15-16.9	< 0.45
Excelling	17 or more	0.45 or more

- For example, if Gila Monster Elementary scores 14 AIMS scale points, the profile will be Performing. The Performing Plus status will be given to schools t hat have enough points to be Highly Performing or excelling, but do not have sufficient students exceeding the standard. An explanation of the Z scores is given in the next chapter.

9. Application of Threshold Criteria for Excelling and Highly Performing Schools

To ensure continued focus on improving the academic achievement of all students, including those students currently demonstrating proficiency, threshold criteria are applied to determine excelling and Highly Performing schools. To be deemed a Highly Performing or excelling school, a school must meet certain levels in the percentage of its students exceeding the standard on the AIMS. Schools must not only receive a total scale value that places them into either excelling or Highly Performing, but must also meet the requisite percentage of students in the exceeds-the-standard category on AIMS to be designated as either an excelling or Highly Performing schools. The application of threshold criteria for excelling and Highly Performing schools results in the following scenarios.

1. A school that receives a total scale value that places it in the excelling classification and meets the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification will be designated an excelling school.

2. A school that receives a total scale value that places it in the excelling classification and did not meet the requisite percentage of students in the exceeds category on AIMS necessary for a excelling classification, but did met the requisite percentage of students in the exceeds category on AIMS necessary for a Highly Performing classification will be designated as a Highly Performing school.

3. A school that receives a total scale value that places it in the excelling classification and did not meet either the requisite percentage of students in the Exceeds category on AIMS necessary for the excelling classification or the Highly Performing classification will be designated as a Performing school. Such schools are recognized with the non-statutory designation of Performing Plus.

4. A school that receives a total scale value that places it in the Highly Performing classification and meets the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification will be designated as a Highly Performing school.

5. A school that receives a total scale value that places it in the Highly Performing classification and meets the requisite percentage of students in the Exceeds category on AIMS necessary for a Highly Performing classification will be designated as a Highly Performing school.

6. A school that receives a total scale value that places it in the Highly Performing classification and did not meet either the requisite percentage of students in the Exceeds category on AIMS necessary for an excelling classification or Highly Performing

classification will be designated a Performing school. Such schools are recognized with the non-statutory designation of Performing Plus.

7. A school that receives a total scale value that places it in the Performing classification will be designated as a Performing school, regardless if the school meets the requisite percentage of students in the exceeds category on AIMS necessary for an excelling classification or Highly Performing classification.

8. A school that receives a total scale value that places it in the Underperforming classification will be designated as an Underperforming school, regardless if the school meets the requisite percentage of students in the exceeds category on AIMS necessary for an excelling classification or a Highly Performing classification.

In previous years, the percentage of students exceeding was calculated as a simple arithmetic average across all subjects and all grades served by a school for the most recent three years. The targets a school needed to meet to earn an excelling or Highly Performing label depended upon the grades served by a school. This was done to account for the fact that the percent of students exceeding declined in the higher grades.

With the incorporation of AIMS scores for additional grades into the achievement profile, the combinatoric goals were considered impractical. Instead, the determination of whether a school met the goals for percent exceeding is based on a z-score calculated in the following manner:

1. For each school, the percent exceeding is calculated by grade across all three subjects for both 2003-05 and 2005. The introduction of a one-year estimation of percent exceeding is to give credit to schools that have shown improvement in the percent of students exceeding the standard.

2. The percent-exceeding is converted into a z-score by subtracting the statewide average for that grade for percent exceeding and dividing by the statewide standard deviation. (These parameters are given in table 9.1)

   Note: The same statewide parameters are used to calculate both the one-year and three-year z-score. This is because the purpose of the z-score is to create standard scores comparable across grades, not to create scores comparing a school's performance to the state norm. The z-scores are fixed parameters so if a school shows improvement over time its z-score will increase regardless of the movement of the state average over the same period.

3. The one- and three-year z-scores across all grades for a school: each school will have two z-scores: one based on its three-year average for percent exceeding, another based on the percent exceeding for the current year.

4. The higher of the one- and three-year averages are taken and compared to the performance thresholds. To be a Highly Performing school, the average z-score for a school must be greater than or equal to 0.45. To be an excelling school, the average z-score for a school must be greater than or equal to 1.00.

Table 9.1. Excelling and Highly Performing Threshold Values by Grade Offered

Grade	Average	Standard Deviation
3	0.15765	0.104773
4	0.117813	0.095565
5	0.129365	0.095985
6	0.089634	0.080117
7	0.067296	0.067094
8	0.063129	0.065949
10	0.047249	0.07642

Example. The following table shows the third grade AIMS scores for Gila Monster Elementary over the past three years.

Table 9.2. Number of Students Exceeding the Standard—Third Grade

Subject	Reading		Mathematics		Writing	
Year	# Exceeding	#Tested	# Exceeding	#Tested	# Exceeding	#Tested
2003	25	100	24	100	23	100
2004	24	105	23	105	22	105
2005	26	99	25	99	24	99
Total	75	304	72	304	69	304

The three-year average for percent of students exceeding the standard is:

$$\text{Percent Exceeding} = \frac{75 + 72 + 69}{304 + 304 + 304} = 23.6\%.$$

The one-year average for percent of students exceeding the standard is:

$$\text{Percent Exceeding} = \frac{25 + 25 + 24}{99 + 99 + 99} = 25.3\%.$$

The three-year z-score for third grade is:

$$\text{z - score} = \frac{.236 - .158}{.105} = .74.$$

The one-year z-score for third grade is:

$$\text{z - score} = \frac{.253 - .158}{.105} = .90.$$

Gila Monster serves grades K-6. The one- and three-year average z-scores for the entire school are:

Table 9.3 Average Z-scores

Grade	One-year	Three-year
K-2	NA	NA
3	.90	.74
4	1.02	.86
5	.89	.72
6	.95	.80
Average	.94	.78

Both the one- and three-year averages are greater than .45, so Gila Monster would earn a Highly Performing profile—if it has earned sufficient points.

10. AZ LEARNS Achievement Profile Appeals Process

Procedure and Timeline

In accordance with A.R.S. §15-241, school administrators are allowed the opportunity to appeal an achievement profile classification on behalf of the schools for which they are responsible.

Step 1: Data Verification/Data Appeal

The first step in completing the AZ LEARNS appeals process requires all schools to review and verify all data in order to confirm its accuracy. The data verification took place utilizing the AZ LEARNS/Adequate Yearly Progress (NCLB) Application through the common logon located at the Department's web site. Data verification took place May 10th through July 7th, 2004. In the application, schools/districts were asked to verify:

- **SAIS/Student Details Demographic Data,** which included student's full name, grade enrolled, SAIS number, date of birth, gender, racial background/ethnic group, English language learner Status (Y/N), special education program membership (Y/N), student's school ID.

- **Pre-printed test label information collected** which included start year (Y/N), number of years in school, number of years in district, 504 Accommodation status, level of English proficiency (ELL or FEP), number of years classified as ELL or FEP, ELL program enrollment.

- **School information** used to determine if a school was to be evaluated for AZ LEARNS.

It is important to note that districts and charter holders are solely responsible for verifying information for their schools. If a district or charter holder does not verify the information for its schools, the ADE assumes the schools on file and the data available are correct as listed.

Step 2: Appeal Application

School administrators that chose to appeal an achievement profile must have completed the appeal application, which was accessible via the common logon during the specified appeal timeframe in order to indicate the exact issues of appeal. Appeals were only accepted through the website application. Appeals sent to ADE via email, fax, or mail/delivery were not accepted.

Schools were able to appeal achievement profiles in two categories: data (statistical) and non-data (substantive) reasons - schools were not limited to one category and were able to appeal in both if necessary.

Schools that appealed based on statistical arguments were allowed to argue that their data was inaccurate. This may have included (but was not limited to) data that was missing, miscoded, or invalid. Any of the data verified, as listed above, may have been included in a statistical argument. Schools that appealed based on substantive arguments were allowed to argue that mitigating factors, outside of the school's control, negatively affected the quantity or quality of test data in any of the years in which data were collected. This included circumstances that affected test conditions, test scores, and performance levels.

School administrators that chose to appeal an achievement profile were required to clearly articulate the issues they believed merited an appeal through the appeal application. School administrators were required to submit evidence that the issues they believed merited an appeal directly resulted in a *significant* decrease in student academic achievement as demonstrated on AIMS or SAT-9 and/or an impacted on other indicators used in the formula (Adequate Yearly Progress (AYP); the Measure of Academic Progress (MAP)-for elementary schools; or graduation/dropout rate-for high schools). The evidence had to be submitted to ADE at the time the appeal was submitted. Failure to provide this evidence resulted in the appeal not being granted. Evidence that was submitted after the appeal deadline closed was not considered. Once appeals were submitted through the common logon, the school/district/charter received an email verifying that the appeal had been received.

The ADE, if necessary, could request that a school administrator provide additional information or evidence to assist in the appeals process. Only those requests for additional information that were provided during the specific timeframe were included in the appeals process. Requests submitted after the specified timeframe were excluded from the appeals process. Unsolicited additional information submitted after the appeal deadline was not accepted.

Step 3: Appeal Resolution

After all appeals were submitted and the appeal window closed, the ADE processed the appeals. Appeals were addressed categorically, not necessarily in the order received, so the fact that a school submitted its appeal during the first day of the appeal window did not mean it would necessarily receive a decision first during the resolution process. The appeal process was implemented in four stages.

Stage 1 – Statistical Appeals Processed. All statistical appeals needed to be supported with compelling evidence. For example, if the school was disputing the number of test scores used in the analysis because some scores were excluded due to coding errors, the school was required to be explicit as to how the number in the analysis was not accurate. Simply stating, "the number of students ADE used in the analysis doesn't match district's count" was not compelling; ADE needed to know *why* the numbers were different; meaning that particular students needed to be identified as miscoded or missing. **Note: Statistical appeals that appeal the formula used to calculate the achievement profile were not accepted.**

Stage 2 – Site Visits for Third Year Underperforming Schools. Schools that were labeled Underperforming for a third consecutive year were entitled to a site visit to determine if the label was warranted. These site visits were important as the third year Underperforming label merited

an alternative designation of failing to meet the academic standards in accordance with statute. After the statistical review of appeals took place, schools labeled Underperforming for a third consecutive time were scheduled to receive that visit. Teams from the Research and Evaluation and State Intervention sections of the ADE visited each of the third year Underperforming schools to gather additional supporting data for the appeal as well as gather information related to the school's Arizona school improvement plan (ASIP) as required by statute. All information gathered from the site visits was taken to the substantive appeal committee for use in the third stage of the appeal process. Only third year Underperforming schools received site visits as part of the appeals process.

Stage 3- Substantive Appeals Processed. Substantive appeals were resolved in a committee process. All committee members represented a diverse background to ensure that appeals were considered from multiple perspectives. Among those perspectives were those of principals, teachers, school administrators, department administrators, researchers, and Title I representatives.

Once the committee was assembled, the appeals were evaluated utilizing an appeals rubric approved by the State Board of Education that evaluated the argument presented and whether or not the evidence provided to support the argument was compelling. The appeals rubric consisted of a three-tiered system for appeal evaluation: 1) Initial review of the appeal to determine its merit. 2) Review of the evidence provided. 3) Committee recommendation.

Initial Review. The substantive appeal rubric provided for three categories that apply during the initial review. Each appeal was classified into the categories based on the information provided in the appeals.

1. ***Data Calculation Discrepancies.*** Appeals of this nature referenced when schools attempted to compare data details provided in the common logon with their data sets and found different results with *their* numbers. If in the appeal, the school/district provided information of data discrepancies and those data discrepancies were actual and not a result of the school or district's inability to replicate the achievement profiles formula, the appeal was deemed as passing the initial review. At this stage, it was important for the school or district to be specific in their claim of differences so that the ADE could adequately determine if the data sets were in fact different.

2. ***Mitigating Factors Outside the School's Control.*** Appeals of this nature referenced when the school indicated significant issues that affected test scores, administration, etc. such as teacher attrition; environmental issues/events; adverse testing conditions; school/community emergency/crisis; etc. If a school provided information detailing a *significant* event that impacted test scores, which was clearly outside the school's control, the appeal was deemed as passing the initial review.

3. ***Implementation of the School Improvement Plan.*** Appeals in this category discussed how the school was actively, consistently, and reliably implemented the school improvement plan; that the priorities of the solutions team had been addressed; the school improvement plan had been revised and updated to address assessed ongoing needs; professional development that supported the targeted goals had been

planned and implemented. If a school provided information highlighting their school improvement plan, it may have accentuated the other two components on the rubric. However, per statute, a successful implementation of the school improvement plan alone cannot change a classification of a school. Additionally, only third-year Underperforming schools may include information about their ASIP in their appeal.

Review of Evidence. Once the appeals progressed through the first tier of the rubric, *initial review*, the evidence provided to support the appeal was evaluated. In this tier, three determinations were possible:

1. ***Compelling evidence:*** in this area, the school or district adequately provided information that led the committee to conclude that, had the circumstance been different, the achievement profile would have been different as well. For example, if a school presented an argument that their data was different and was able to provide specific and relevant data supporting their claim, they were deemed as providing compelling evidence. If a school had a special circumstance that affected a certain grade and were able to demonstrate that the specific grades test scores suffered, they were deemed as providing compelling evidence. Again, if a school provided compelling evidence highlighting their school improvement plan, it may have accentuated the other two components on the rubric (data calculations/mitigating factors). However, per statute, a successful implementation of the school improvement plan alone could not change the classification of a school.

2. ***Not compelling evidence*:** appeals were categorized in this area when they were able to provide information that a significant issue *could* have impacted the school's performance but did not provide detailed, specific information as to specific outcomes that hindered the school's performance. For example, if a school had high teacher attrition mentioned as a special circumstance, the committee might have accepted that appeal during the initial review. However, during the evidence stage, the committee needed to know when the teachers left the school, what grades were affected, and if test scores suffered in that grade (as compared to other grades or prior years). If no specific information is presented, other than there was attrition, that evidence was deemed as not compelling. Another example of this type of outcome was in the case of a school mentioning that they had high teacher attrition in certain grades during a specific year. However, if researching the test scores found that the grade in question had higher scores in that year than other grades/classes and other test years despite the attrition, the evidence would not be compelling.

3. ***Not applicable evidence:*** if an appeal was submitted, made it through the initial review, and presented evidence that was not linked in any way to the performance of the school, the evidence was deemed not applicable. For example, some appeals described data discrepancies as a problem yet support their data with evidence that argued the AZ LEARNS methodology (which is not eligible for appeal). In cases such as this, the evidence was deemed inapplicable. If the evidence did not directly support the claim made in the appeal, it was deemed not applicable.

Committee Recommendation. Once the appeal and evidence were reviewed, the committee arrived at a decision as to the outcome of the appeal. There were three possible outcomes:

1. ***Appeal granted and AZ LEARNS determination changed.*** In these cases, the appeal successfully made it through the initial review and evidentiary stages. It was determined that the points needed to change classifications would have been earned by the school had the special circumstance/data discrepancy not occurred. Therefore, the classification for the school was changed.

2. ***Appeal granted and AZ LEARNS determination remains the same.*** In these cases, the appeal successfully made it through the initial review and evidentiary stages. However, it was determined that the criteria needed to change classifications were not earned by the school had the special circumstance/data discrepancy not occurred. For example, a school provided information and evidence that their AYP point was not accurately included in the calculations and the committee determined the school provided information to prove they earned the 1-point set aside for AYP in the AZ LEARNS formula. However, the school needed 5 points to get from Underperforming to Performing. Therefore, the one point earned was not enough to change their designation, so their determination remained the same.

3. ***Appeal Denied.*** In these cases, the appeal did not successfully make it through the initial review and evidentiary stages. Therefore, the classification for the school remained the same.

Appeal Resolution Notes. If a school submitted both a statistical and substantive appeal, the statistical appeal was evaluated first. Only after the statistical arguments had been exhausted and site visits had taken place (where applicable), was the appeal sent to the substantive committee for evaluation. Schools needed to be certain to provide all information/support when submitting an appeal; late information to support the appeal was not accepted (unless ADE specifically asked for additional information as noted above or the information was gathered in a site visit where applicable).

Stage 3 – Notification of Result Sent to Schools

Once all appeals were resolved, notifications were sent to the schools that filed appeals. The contact person of record for the school received an email from the ADE with directions as to how to access appeal information via the common logon when the appeal was processed. Schools were notified before the final public release of the achievement profiles as to the outcome of the appeal process. All appeals were final.

11. AZ LEARNS Achievement Profiles for Alternative Schools

In 2004, the ADE published profiles for alternative schools for the first time. Alternative schools are defined as schools that meet the Board-approved definition as schools whose sole and clearly-stated mission is to serve specific populations of at-risk students. Alternative school status is granted by application to the ADE. A.R.S. §15-241 makes an allowance for a "parallel" evaluation method for alternative schools. When AZ LEARNS achievement profiles were first issued in 2002 the Board determined that alternative schools would not receive an achievement profile using the conventional AZ LEARNS methodology, and that ADE should develop an alternate method for evaluating these schools.

General Process to Produce Achievement Profiles for Alternative Schools

The small number and wide variety of alternative schools makes it difficult to develop reliable parameters for measures of school performance. Consequently, a single method of evaluating alternative schools was created that employed performance measures available to the majority of schools. In plainer terms, it would be too inaccurate to develop separate methods for large alternative high schools, small alternative high schools, alternative middle schools, and small alternative middle schools. Given the small number of schools in each category, benchmark performances and expectations would be very unreliable. Consequently, ADE developed a single rubric to evaluate all alternative schools.

The method for calculating an achievement profile for alternative schools is as follows:

1. AIMS scale score points are calculated using Status only. Status points were calculated like the regular schools based on percentage of students passing the AIMS test.

2. Added evidence points are not included in the achievement profile for alternative schools. Because most alternative schools below the high school level are quite small and have highly mobile populations, there would be little or no students in the Measure of Academic Progress analysis. Consequently, the MAP analysis would be highly volatile and inaccurate.

3. Points based on an alternative school's dropout rate are calculated as for all other schools.

4. As with other schools, alternative schools will receive one scale score point if they make AYP for the current year.

5. Alternative schools will only receive labels of Performing and Underperforming.

Because of the uncertainty of measurement associated with small sample sizes and the high stakes of school labels, schools initially determined to be Underperforming receive a

"second look." Instead of determining baseline groups based on the mean percent of students passing AIMS, an alternate baseline group for these schools is determined based on the upper bound of a 95 percent confidence interval around the mean. If a school initially determined to be Underperforming moves to a higher classification due to the "second look," that school will receive a Performing label.

Definition of an Alternative School

The following is the definition of an alternative school as approved by the Board of Education in 2002. There are currently 138 schools that have been granted alternative school status.

1. A school operated by a school district must have adopted a mission statement that clearly identifies its purpose and intent to serve a specific student population (please see criterion three) that will benefit from an alternative school setting. A charter school must be expressly chartered to serve a specific student population that will benefit from an alternative school setting.

2. The educational program and related student services of the school must match the mission or charter of the school.

3. The school must intend to serve students exclusively in one or more of the following categories:

    - Students with behavioral issues (documented history of disruptive behavior)
    - Students identified as dropouts
    - Students in poor academic standing who are either severely behind on academic credits (more than one year) or have a demonstrated pattern of failing grades
    - Pregnant and/or parenting students
    - Adjudicated youth

4. Any school offering secondary instruction for academic credit used to fulfill Arizona State Board of Education graduation requirements (in part or in full) must offer a diploma of high school graduation.

Calculation of an Achievement Profile for an Alternative School

In addition to AIMS scale score points, alternative schools also earn scale score points via their dropout rates and their current AYP status. The methods used to calculate scale score points earned by alternative schools for these performance measures are the same as the methods used for other schools.

Figures 12.1 and 12.2 give a graphical summary of the method for evaluating alternative schools at the elementary and high school levels.

- A school may receive up to six scale score points for each subject/grade combination it serves. This is represented by the far left column in each figure.

- A school may receive one point if it has made adequately yearly progress (AYP) under the methodology mandated by the No Child Left Behind Act. This is represented by the column second-from-left in each figure.

- If a school is a high school it may receive one point based on its dropout rate. This is the third-from-left column in Figure 12.2.

- The total points earned by a school are added up and compared to the school classification scale to determine a school's preliminary classification—the final column in Figures 12.1 and 12.2.

Figure 11.1. Method for Evaluating Alternative Schools (Elementary Schools)

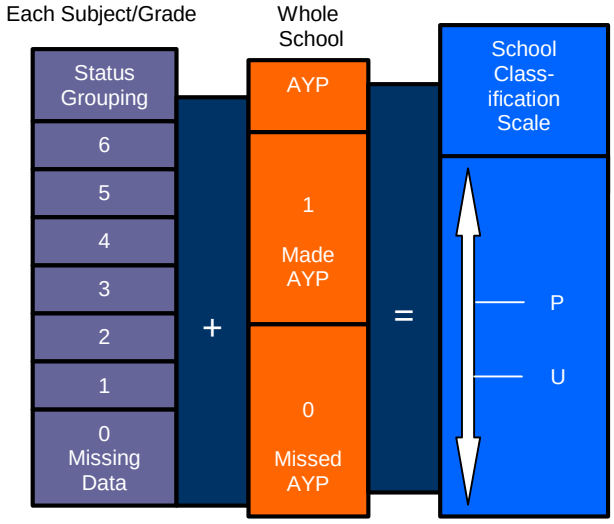
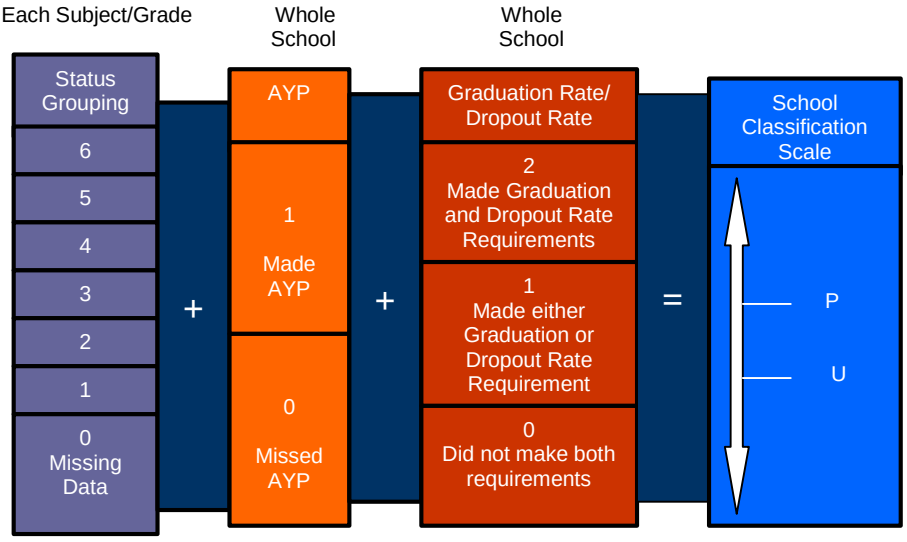


Figure 11.2. Method for Evaluating Alternative Schools (High Schools)



Classification Scales for Alternative Schools

The following classification scales are used for alternative schools. Separate classification scales are used for high schools and elementary schools due to extra points being available to high schools from the dropout rate.

Table 11.1. Alternative School Classification Cut Points

		Subject/Grade Combination 1	Subject/Grade Combination 3	Subject/Grade Combination 6	Subject/Grade Combination 9
358 Schools	Underperforming	< 2.0	< 5.0	< 11.0	< 16
	Performing	2.0	5.0	11.0	16
High Schools	Underperforming	<2.0	<6.0	<12.0	<18.0
	Performing	2.0	6.0	12.0	18.0

12. AZ LEARNS Achievement Profiles for K-2 Schools

When AZ LEARNS achievement profiles were first issued in 2002 the Board determined that K-2 schools would not receive an achievement profile using the conventional AZ LEARNS methodology, and that ADE should develop an alternate method for evaluating these schools. In 2004, the ADE published profiles for K-2 schools for the first time. K-2 schools are schools that serve only grades kindergarten through second grade. Since the AIMS is not administered at any of the grades served by these schools, the AZ LEARNS profiles are based solely on the performance of the schools' second graders on the state's norm-referenced test.

The method of calculating the profile for these schools is straightforward:

1. The average percentile ranks on the reading and math portions of the test are calculated for the most current year for a school's second graders.

2. The average percentile ranks for the school are added together, and

3. Compared to a scale to determine the school's label.

Example**.** In 2004, the average percentile rank for second graders in Gila Monster Elementary was 52 for math and 48 for reading. The two averages summed together yield 52 + 48 = 100 points. This is sufficient for Gila Monster to be a Performing school. (Please see the scale on the next page.)

In 2005, the ADE discontinued the use of the Stanford 9, and instead began administering the TerraNova in second grade. Since the scale in table 13.1 is based on school performance on the Stanford 9, school-level, average percentile rank scores on the 2005 TerraNova were converted to equivalent Stanford 9 average percentile ranks using the tables available in the linking study conducted for ADE by the testing contractor CTB/McGraw Hill. The converted scores were then compared to the scale to determine school profiles.

Setting the scale

The cutpoint for Performing schools is set at the sum of 68—equivalent to the expectation that students in a Performing school average in the 34th percentile in reading and math. It is equal to one standard deviation below the state average. In other words, Underperforming schools are in the bottom 16 percent of schools compared to performance of second graders statewide.

The cutpoint for Highly Performing schools was set at the sum of 130—equivalent to the expectation that students in a Highly Performing school average in the 65th percentile in reading and math. It is equal to one-half standard deviation above the state average. In other words,

Highly Performing schools are in the top 31 percent of schools in reading and math compared to performance of second graders state.

The cutpoint for excelling schools was set at the sum of 150—equivalent to the expectation that students in a Highly Performing school average in the 75th percentile in reading and math. It is equal to one standard deviation above the state average. In other words, Highly Performing schools are in the top 16 percent of schools in reading and math compared to performance of second graders state.

Table 12.1 illustrates the cut points for the K-2 schools.

Table 12.1. AZ LEARNS Scale for K-2 Schools

Points	Achievement Profile
<68	Underperforming
68	Performing
130	Highly Performing
150	Excelling

School Name: _____ Entity ID: _____ Reviewer ID #: _____ Date: _____

Evaluation Criteria	Initial Review (Please check the applicable option)			Review of Evidence Provided	Comments
Data Calculation Discrepancies i.e., school attempts to compare data details with their data sets and gets different numbers	Not applicable	ADE data are accurate and calculations are correct.	Data does not match that of ADE. School submits evidence of discrepancies and provides additional data.	☐ Compelling evidence ☐ Not compelling evidence ☐ Not applicable evidence	
Special Circumstances Outside the Control of School/District Administration or Management i.e., school indicates significant teacher attrition; environmental issues/events; adverse testing conditions; school/community emergency/crisis	Not applicable	Special circumstances that were outside of the school's control, were not a substantial cause of the overall school performance.	School had a situation that was unavoidable and outside of the school's control and hindered the test administration or student performance. This situation resulted in adverse data for the year(s) in question.	☐ Compelling evidence ☐ Not compelling evidence ☐ Not applicable evidence	
Policy/Methodology Issues i.e., school disagrees with use of two year baseline	The ADE will not accept/review appeals related to policy/methodology.				

School Name: _____ Entity ID: _____ Reviewer ID #: _____ Date: _____

Appendix VI: Substantive Appeal Rubric for AZ LEARNS

Team Decision AZ LEARNS Substantive Appeal
(Results represent group consensus regarding appeal)

Reason Reviewed	Initial Review			Review of Evidence		
Data Calculation Discrepancies	N/A	Correct data/calculation	Data does not match	N/A	Compelling evidence	Not compelling evidence
Special Circumstances	N/A	Did not cause overall performance	Adverse result based on situation	N/A	Compelling evidence	Not compelling evidence
Policy/Methodological Issues	**The ADE will not accept/review appeals related to policy/methodology.**					

Please indicate appropriate response(s) by checking within the box(es) provided.

Committee Recommendation: Granted Denied

Final Appeal Decision: Granted Denied

Comments:

Appeal Result: