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ABSTRACT

The 2001 results of Arizona's Measure of Academic Progress (MAP) mark the third annual release of this important school accountability tool. The 2001 MAP results are slightly different from the results of previous years in that they show the percent of students who achieve One Year's Growth (OYG) and present results in a more accessible format. The percentage of students making OYG from 2000 to 2001 ranged from 65% in second to third grade mathematics to 82% in fifth to sixth grade mathematics. When all students achieve OYG, schools will ensure that no students are falling behind. MAP results do not show any gap for students from ethnic groups, although percentile ranks do indicate significant gaps between students of different ethnic groups. This finding does illustrate that schools are moving students forward at the same rate, although the challenge still remains to bring up the absolute achievement level of minority students. A guide is presented to reading the MAP reports. (SLD)

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Arizona Measure of Academic Progress

Third Annual Look at Growth in Arizona Schools

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Research & Policy
November 2001

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Analysis of the Arizona Measure of Academic Progress 2000-2001

"The goal of a purposeful school accountability system is to fairly and accurately measure school performance in order to publicly identify and improve low performing schools."

Superintendent of Public Instruction, Jaime A. Molera

The 2001 results of the Measure of Academic Progress (MAP) mark the third annual release of this important school accountability tool. From its inception, MAP has represented a significant shift in the way educators, policymakers and the public view school performance. Instead of focusing on students' absolute achievement—greatly influenced by factors outside of a school's control—MAP captures the effects of schooling on student academic attainment.

MAP is significant because it provides a fair and accurate measure of student academic growth. Unlike traditional measures of achievement, such as percentile ranks that mark achievement at one point in time, MAP measures growth over time. A measure of the progress made in that year is obtained through linking individual student test scores over the course of a year. This progress is attributed to the school the student attended, if a student has remained in the same school for the academic year.

Teachers and other educators recognize the value of MAP, because it measures the work done at the school. Teachers know that the preparation and skills that students bring with them to school will vary and are influenced by factors outside of school. It is a teacher's job, however, to take students regardless of achievement level and demonstrate one year's growth. For the first time, using an Arizona statewide assessment system, student progress is measured and used to judge school effectiveness.

MAP has also shattered long held stereotypes about good schools and low performing schools. Traditional measures of achievement, such as percentile ranks, are highly correlated to student demographic variables. As a result, the same schools consistently score at the top and bottom of the percentile rank listings. With MAP as the measure of school effectiveness, schools traditionally seen as low performing, by way of a percentile rank, show remarkable gain with the students they have had an opportunity to teach.

In a climate of increased accountability for students and schools, MAP is an extremely powerful tool. It is an indicator stripped of the traditional limitations of academic achievement scores. It captures the work of schools and holds them accountable for the growth of all students, regardless of achievement level. Growth or lack of growth can be attributed to factors under a school's control, such as curriculum and instruction. It is a necessary component of a fair and accurate purposeful school accountability system. Without MAP, there is a great danger of identifying schools with low performing students as "underperforming" or "failing," when in fact, they are making great gains with the students they have had an opportunity to teach.

MAP Key Features:

- captures individual student growth over time
- accounts for mobility
- includes only those students a school has had an opportunity to teach
- captures schooling effects, not student demographic effects
- provides meaningful information to teachers
- focuses on *all* students
- aligns to the Arizona Academic Standards

The 2001 MAP results are slightly different from the results of previous years. The results show the percent of students who achieve One Year's Growth (OYG). The improved method for calculating MAP maintains all of the key features of previous MAP results, while providing a more accessible format to teachers and parents. This is particularly useful to teachers as they look to measure progress within their own classrooms.

How to Use MAP Data

Parents and educators can use MAP to isolate the effects of schools on student performance. The best way to use MAP is to compare growth between schools that face similar circumstances. The ADE recommends that parents and educators do the following:

1. Identify a group of schools that face similar challenges.
2. Look for differences between these schools in the percent of students making OYG.
3. Engage in conversations about successful teaching practices used in high growth schools.

Schools can benefit greatly from talking with similar schools and sharing successful teaching strategies.

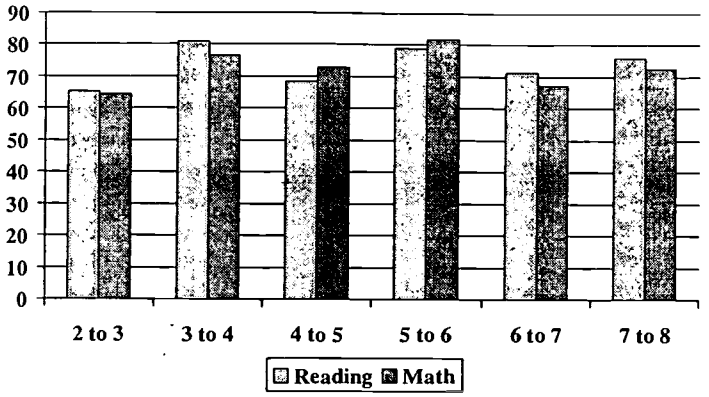
One Year's Growth

One Year's Growth (OYG) is broadly defined as attaining the same level of absolute achievement, after one year, while learning more difficult material. For example, a student who begins at the 5th stanine (50th percentile) as a 3rd grader and maintains a 5th stanine score as a 4th grader has achieved OYG. This is the minimum growth that is expected for any student who remains at a school for an academic year.[1] When all students achieve OYG, schools ensure that no students are falling behind from one school year to the next.

The percent of students who made OYG from 2000 to 2001, in each grade and subject area, are depicted in Graph 1. The percent of students making OYG ranges from 65% in 2nd to 3rd grade math to 82% in 5th to 6th grade math.[2]

[1] Please see appendix A "How to Read the Report" for a more thorough explanation of how to compute OYG.
[2] The data used in the report can be found in Appendix B.

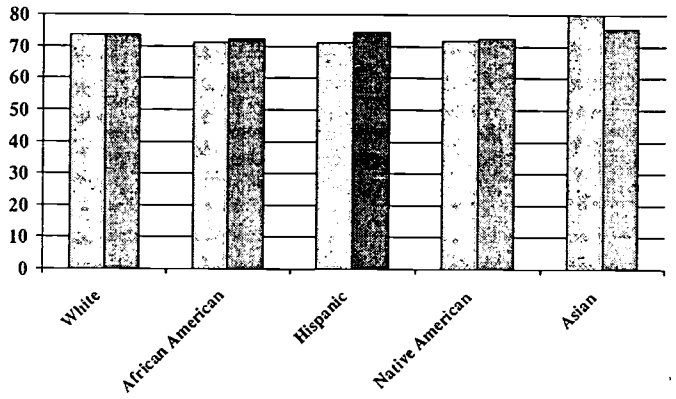
Graph 1. Percent of Students Making OYG by Grade, Reading & Math



Ethnicity and Growth

One of the major concerns in education is the consistently low achievement of minority students. When looking at percentile ranks, significant gaps exist between students from different ethnic groups. However, when MAP is used to measure whether all groups of students are making OYG at the same rate, no such gap exists. The following graph shows the percentage of students who achieve OYG in reading and math by ethnic group.

Graph 2. Percent of Students Making OYG by Ethnicity, Reading & Math



This finding is significant as it indicates that all students, regardless of ethnicity, are achieving OYG at the same rate. It illustrates that schools are moving all students forward at the same rate. However, the challenge still remains to bring up the absolute achievement level of minority students.

Attainment of the Arizona Academic Standards is critical to student success and simply making OYG will not be enough for some students to meet the Standards. This highlights a limitation of MAP in that it does not present the entire picture of student achievement. While aligned to the Standards, MAP does not directly measure students' attainment of the Standards. The Arizona Instrument to Measure Standards (AIMS) serves that role. Combined, the two provide the foundation for the purposeful school accountability system that will be proposed to the State Board of Education and Legislature in the following months.

How to Read the Report
Arizona Measure of Academic Progress
2000-2001 School Year

The Arizona Measure of Academic Progress (MAP) is used to measure individual student growth. Student Stanford 9 test scores are linked from one year to the next and growth on the test is calculated. One Year's Growth (OYG) is defined as attaining the same stanine score or a higher stanine score than the year before. The only exception is that students who begin in Stanine 9 and move to Stanine 8 will make OYG.

For example:

Stanine 1999	Stanine 2000	Result
5	5	OYG
6	7	OYG
9	8	OYG
5	4	Did not Accomplish OYG

The percent of students who achieve OYG is reported for every grade and subject area combination at the school. A school-wide percent of students who achieve OYG is also reported.

Stanine
Stanines are standard scores that range from a low of 1 to a high of 9, with 5 designating average performance. National stanines, like national percentile ranks, indicate a student's relative standing in the national norm group.

Grade
This denotes the grades for which the percent of students making OYG is calculated. For example, for the 2000-2001 school year, "2 to 3" indicates students who were in grade 2 in the spring of 2000 and in grade 3 in the spring of 2001.

Enrollment
This is the number of students reported to the ADE's School Finance Unit as enrolled in the school on October 1st of the given school year. For example, for the 2000-2001 school year, the number represents the enrollment reported for October 1, 2000. This is given as an indicator of total enrollment and to help schools determine what percentage of their students are represented in the analysis.

Number in the Analysis
To be included in the analysis, students were required to meet the following criteria:

- were matched from one year to the next using a combination of first name, last name, date of birth and gender
- did not take the test with accommodations in either year
- had valid scores in the subject area for both years
- were in the same school for both years or who answered "Yes" to the question "Did you start the school year at this school?" on the Stanford 9 answer document
- took the next highest grade level test in the second year—for example, took the grade 3 test in 2000 and the grade 4 test in 2001

This number serves as the denominator when calculating the percentage of students who make OYG.

Number Making OYG
This is the number of students who make OYG as defined above. This number serves as the numerator when calculating the percentage of students who make OYG.

Percent Making OYG
This number is calculated by dividing the Number Making OYG by the Number in the Analysis and multiplying by 100.

Arizona Measure of Academic Progress
Statewide Results

PERCENT OF STUDENTS MAKING OYG BY GRADE		
GRADE	**MATH**	**READING**
2 to 3	65%	65%
3 to 4	77%	81%
4 to 5	73%	69%
5 to 6	82%	79%
6 to 7	68%	71%
7 to 8	73%	76%

PERCENT OF STUDENTS MAKING OYG BY ETHNICITY		
ETHNICITY	**MATH**	**READING**
WHITE	74%	74%
AFRICAN AMERICAN	71%	72%
HISPANIC	71%	74%
NATIVE AMERICAN	72%	73%
ASIAN	80%	76%

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