THE MISSOURI GROWTH MODEL

A PRiMER

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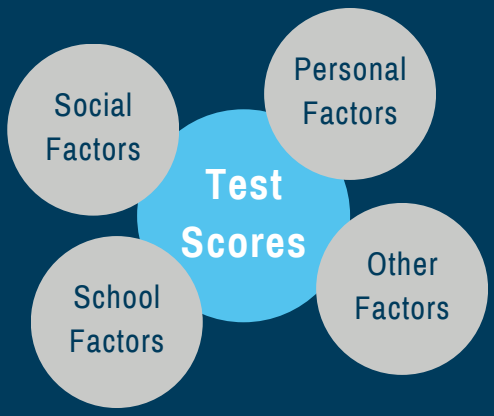
MISSOURI ASSESSMENT PROGRAM (MAP) TESTING

Each year, the state of Missouri uses Missouri Assessment Program (MAP) testing to gather data related to student achievement according to the Missouri Learning Standards at the student, class, school, district, and state levels.

	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	HS
Math	√	√	√	√	√	√	√
ELA	√	√	√	√	√	√	√
Science			√			√	√
Social Studies							√

Students are tested each Spring. They are given a numerical scale score and assigned a proficiency level of Below Basic, Basic, Proficient, or Advanced.



STANDARDIZED TEST SCORES

A variety of factors impact test scores. MAP scale scores give a snapshot of how much a student knows when they are tested but do not represent how much a student has learned in a given school year. Stakeholders want to know not only how much students grow from one year to the next, but also how much of that can be attributed to the school environment.

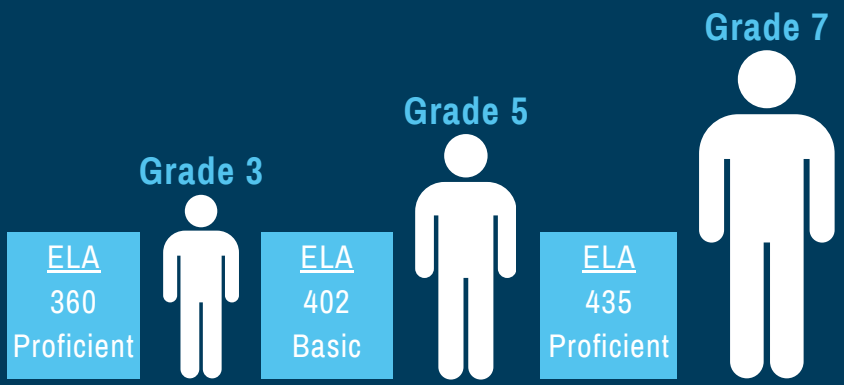
GROWTH AS MEASURED BY TEST SCORES

While it may be intuitive to think of student growth as the difference between a student's MAP scale score in one year compared to the previous year:

- The exam that students take each year typically covers different content, and
- Scale score ranges increase across grade levels.

The example below demonstrates how test scores alone could misrepresent growth.

EXAMPLE



The same student takes an ELA exam in 3rd, 5th, and 7th Grade. Using MAP scale scores, the student appears to have increased their knowledge year to year. Although the increase between Grade 3 and Grade 5 was 42 points, the student dropped from Proficient to Basic. The increase between Grade 5 and Grade 7 was only 33 points, but the student returned to the Proficient category.

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IF NOT TEST SCORES, WHAT SHOULD WE USE?

Instead of simply comparing MAP scale scores year to year to track growth, experts advocate using statistical models which examine the relationship between last year's score and this year's score. Because scale scores often reflect factors outside a school's control, we believe that student growth is a fairer measure of how well schools are doing at promoting student learning.

GROWTH SCORES

Since 2013, the state of Missouri has used the Missouri Growth Model (MGM) to determine how much a school or district has contributed to student learning.

The MGM has gained recognition for its ability to separate the effect that schools have on student learning from the effect of non-school factors.

STEP 1: Estimates
Average scores are estimated for each grade, subject, and school year for students with similar prior achievement, adjusting for factors outside a school's control.

STEP 2: Differences
The MGM finds the difference between each student's actual score and the average score for a student with similar characteristics.

STEP 3: Averages
Scores for schools and districts are calculated as the average of these student-level differences.

PRIME GROWTH SCORES

To help families and educators better understand growth scores, PRiME has taken the growth scores and transformed them into a more familiar scale. The order of each school in the PRiME growth score remains unchanged, but the average score is now 85 and there is a wider range of potential scores. Similar to letter grades that the education community is familiar with, scores above 90 would represent a very good growth score, while a 70 would represent a low growth score.

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