Gain vs. Growth

Data Use Resource

Gain vs. Growth

Purpose

This resource explains the difference between Gain and Growth measures on assessments like MAP. It includes an overview of the concepts, a discussion of how [School Improvement Plan Goals](#) are set, and considerations for using Growth data to set [Student Learning Objectives (SLOs)](#) for Educator Effectiveness.

Contact

In For questions about this resource, contact Bo McCready in the Research & Program Evaluation Office, bmccready@madison.k12.wi.us.

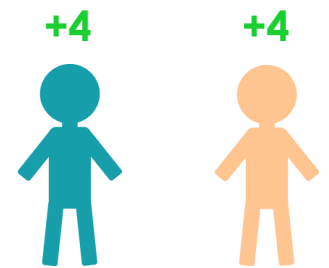## Essentials of Gain vs. Growth

The concept of meeting benchmark, on MAP or any other assessment, is relatively simple. We consider a student to have met a benchmark if their score is above a certain level or cutoff. But understanding changes in scores over time can be more complicated.

Imagine two students who took both the Fall and Spring MAP Reading assessments in MMSD. Imagine that these students each had a RIT score that was four points higher in the Spring than in the Fall. Did these students make similar progress during the year? And should we be similarly excited about each of their progress?

+4 **+4**

The answer is, "not necessarily." The two students above each gained four RIT score points. But by considering their change in score relative to where they started, we can look at their growth instead. This is the root of the growth calculation for MAP.

Target

177+7 = 184

Target

240+4 = 244

When a student takes a Fall MAP Reading or Math assessment, their score will include a RIT score growth target for fall to spring. This growth target is set based on typical growth for all students nationally in the same grade with the same RIT score. For example, a student in grade 5 with a fall Reading RIT score of 177 (falling into the "minimal" range) might have a growth target of 7, while a student in grade 5 with a fall Reading RIT score of 240 (falling into the "advanced" range) might have a growth target of only 4.

177+4 = 181

Did not meet target

240+4 = 244!

Met target

So, if that student with a 240 raised their score by 4 points to get a Spring score of

244, we would say they met their growth target and celebrate this success. But if that student with a 177 raised their score by 4 points to get a Spring score of 181, we would say they did not meet their growth target, because students nationally who had a 177 tended to raise their scores to a 184.

By thinking about growth using MAP's growth targets, we can better understand what a student's RIT score improvement means, because the same gain that would be a reason for celebration for one student might represent less than typical progress for another.

School Improvement Plan (SIP) Goals

You probably know that MAP Growth is one of MMSD's key measures in the Strategic Framework for both Reading and Math. You probably also know that MAP Growth is one of the areas for which your school sets a goal for the SIP each year. So, how are your school's annual results for MAP Growth calculated?

When we determine what percent of students met their growth targets, we simply look at each student's Fall and Spring scores, look at the fall to spring growth target they received with their Fall score, and see if their Spring score was high enough that they met or exceeded their growth target. So, a school with 60% of students meeting their growth targets in Reading would have a 60% end-of-year result for that measure. Students also receive a typical fall-to-fall growth target with their fall MAP scores, but we choose to focus on whether students meet the fall-to-spring target so we can reflect on their progress during the school year.

For these SIP measures, students must meet some criteria to be included in the end-of-year results for the district and for your school; you can learn about these by visiting the [Data Dashboard](#), clicking on the "Reports" tab, and scrolling down to read the "SIP Goals Overview."

Remember that we said each student's growth target is based on the typical growth for students in the same grade and with the same RIT score nationally. You can look at students who exceeded their growth target as being above the national average. This is something we should keep in mind when setting our growth goals. Although we believe that all of our students have the potential to grow at high rates, a goal of having 100% of students meet or exceed their growth target might not be realistic. For example, a school with 78% of students in 6th grade meeting or exceeding their growth target in Reading would be at the [99th percentile nationally](#)!

Using MAP Data within the SLO Process

Results from MAP testing may be used as part of the body of evidence to show whether students have achieved the SLO. In this section we will explore some of the things to keep in mind when using MAP growth data to set Student Learning Objectives, or SLOs. These considerations can help you to set challenging but attainable goals.

Considerations for deciding to use MAP to measure SLOs

Validity: Verify that the MAP test measures what you are seeking to measure with your SLO.

For example, although the Language Use section includes questions about writing, it is not a complete measure of students' writing ability. You would want to use students' Language Use scores in combination with student writing samples.

Timing: Check with your evaluator to determine whether MAP results will be available before your final evidence is due. The Spring testing window closes at the end of May, so district results are available in Data Dashboard in June. Test results are available within your [NWEA account](#) the day after testing.

Considerations for setting goals related to MAP scores

Historical Context: How much growth have your students previously shown? What was the prior achievement level of your students? You can access reports from previous years within the NWEA system by changing the Term Rostered and Term Tested fields for the Achievement Status and Growth (ASG) Report.

Similar Student Context: How much growth do similar students show? The growth projection for each of your students is shown on the ASG report.

Classroom/School Context: Do the students in your classroom or school have certain characteristics that may influence how much growth they show? In a "typical" classroom, about 50% of students meet their growth target.

Need for Accelerative Growth: A student who meets her growth target will remain at about the same percentile for achievement. For example, a 5th grader with a Reading RIT of 200 in the Fall would score at the 31st percentile and would have a growth projection of 6. Meeting that target would put her at the 34th percentile at the end of the year. A stretch goal of 209 would put her at the 42nd percentile. If your class' mean RIT is well below benchmark, you will have to aim higher than the growth projections to help those students catch up with their peers.