



Calculating Rates of Improvement (ROIs)

Description



In order to determine if a student is making “adequate” progress, it is important to measure their growth against multiple comparison groups. While there is no “gold-standard” cut score for how much growth is enough, using multiple comparisons allows us to make a well-informed judgment. It also allows us to compare the student to **appropriate** comparison groups, such as students with a similar instructional history and English Language Learners with similar language levels and acculturation.

Growth can be measured by calculating the weekly Rate of Improvement, or ROI, for the target student and for the groups that we intend to compare the student to. In order to make a well-informed judgment on “adequate” progress, teams should calculate the following weekly ROIs:

Rate of Improvement	Description	Notes/Things to Consider
ATTAINED ROI	Actual weekly growth of the target student	<i>When determining initial and final performance levels, use a screening score or the median score of the 3 most recent data points.</i>

Compare the student’s attained ROI to the following comparison ROI’s

Comparison ROI	Description	Notes/Things to Consider
1. TYPICAL ROI	Weekly growth of a student who starts the year at the grade level benchmark and remains at benchmark through Winter and Spring	<i>Use the beginning-of-year and end-of-year benchmark or cutpoint for low risk (for example, 40th %ile) to calculate this ROI</i>
2. TARGETED ROI	Weekly growth needed for the target student to meet the end-of-year grade level benchmark, given their initial level of performance	
Peer ROIs:	Weekly growth of one or more comparison groups of students in your school/district. See below for further description	
3. DISTRICT/SCHOOL ROI	Average weekly growth of all students in your school/district at a given grade level.	<i>This can be calculated using the previous year’s grade-level data, since you may not yet have a full year’s worth of data for the current academic year.</i>
4. INTERVENTION GROUP ROI	Average weekly growth of all students in your school/district receiving a similar level of intervention supports to your target student	<i>This comparison group should only include students in the target student’s intervention group OR students who have been receiving a very similar level of instructional support to the target student.</i>
5. ELL COHORT ROI	Average weekly growth of ELL students in your school/district that are similar to your target ELL student across multiple variables: <ul style="list-style-type: none"> • Language (native) • Length of time in school • Length of time in country • Level of native language proficiency • Level of English language proficiency 	<i>In order to determine adequate growth for ELL’s, growth must be compared to other ELL’s who have similar language/acculturation levels</i>

Calculating Rates of Improvement (ROIs) Directions and Formulas

Step 1:	<p>Determine the <i>beginning performance</i> and <i>ending performance</i></p> <ul style="list-style-type: none"> For the Target Student this can be done using the student’s benchmark score(s), or the median of the most recent 3 progress monitoring scores For a Comparison Group (e.g. district/school, intervention group, or ELL Cohort), this can be done by taking the average beginning and ending score of the group. For example, you could take the average Fall Benchmark score and the Average Spring Benchmark score.
Step 2:	Calculate the difference between the <i>beginning performance</i> and <i>ending performance</i> to get the TOTAL GROWTH
Step 3:	<p>Calculate the # OF INSTRUCTIONAL WEEKS between <i>beginning performance</i> and <i>ending performance</i></p> <ul style="list-style-type: none"> For the Target Student this will be the number of weeks the intervention(s) have been provided For a Comparison Group (e.g. district/school, intervention group, or ELL Cohort), this could be either the total number of <u>instructional weeks</u> in the school year if using a full year of data OR it could be the number of weeks the comparison group has received similar intervention support
Step 4:	Divide TOTAL GROWTH by # OF INSTRUCTIONAL WEEKS to get the weekly RATE OF IMPROVEMENT (ROI)

GROWTH FORMULA	(TOTAL GROWTH)			÷	# of Instructional Weeks	=	Rate of Improvement (ROI)
	(Ending performance	-	Beginning performance)				
ATTAINED ROI		-		÷		=	
TYPICAL ROI		-		÷		=	
TARGETED ROI		-		÷		=	
DISTRICT/SCHOOL ROI		-		÷		=	
INTERVENTION GROUP ROI		-		÷		=	
ELL COHORT ROI (if applicable)		-		÷		=	

If a student’s Attained ROI is significantly less than most of the comparison ROI’s, they are not making adequate progress