Setting Individual RTI Academic Performance Goals for the *Off-Level* Student Using Research Norms

Students with *significant* academic deficits can present particular challenges as teachers attempt to match them to appropriate RTI supplemental academic interventions. Often, these Tier 2/3 interventions are ‘off-level’; that is, they target academic skills that are below the student’s grade placement.

It might be a mistake, however, to measure the student using only assessments from the student’s grade of record if that student has significant academic delays. The problem with monitoring the progress of an off-level student using only assessments from the current grade level is that these assessments could prove so difficult that they fail to show the true gains that the student is making on the off-level intervention. For students with significant academic delays, then, the school must follow sensible and consistent guidelines for matching those students to appropriate supplemental off-level interventions, for setting performance goals, and for measuring their academic progress that will both benefit the student and accurately reflect actual student growth.

First, it should be acknowledged that goal-setting is an essential part of any student’s RTI intervention plan. To set a goal for student academic performance, these elements are needed:

- **The student’s baseline academic performance.** Prior to starting the intervention, the teacher calculates baseline performance by assessing the target student several times with the academic measure that will be used to measure that student’s progress once the intervention begins.

- **Estimate of ‘typical’ peer performance.** The teacher has a reliable estimate of expected or typical peer performance on the academic measure that will be used to measure the target student’s progress.

- **Estimate of expected weekly progress.** The teacher selects a rate of weekly academic progress that the target student is expected to attain if the intervention is successful.

- **Number of weeks for the intervention trial.** The teacher decides on how many weeks the RTI intervention will last, as the cumulative, final academic goal can be calculated only when the entire timespan of the intervention is known.

The remainder of this article describes how the formulation of academic goals for students who receive 'off-level' supplemental interventions will always contain the four universal goal-setting elements described above—but includes special instructions for estimating typical peer performance and expected weekly progress for this group.

Below is a 6-step process adapted from Shapiro (2008) for finding the optimal 'off-level' grade for monitoring a student with substantial academic deficits, for setting progress-monitoring goals for that student, and for adjusting periodically the student’s intervention and monitoring to reflect growth in student skills:

1. **Obtain Research-Derived Academic Screening Norms With Percentile Cut-Points.** The process of finding a student’s appropriate off-level placement in academic intervention begins with the school selecting a set of research-derived academic screening norms. These norms should include values for fall, winter, and spring of each grade and should be broken down into percentile cut-offs (e.g., norms at the 10th percentile, 25th percentile, 50th percentile, etc.). Commercially available screening packages such as AIMSweb (http://www.aimsweb.com) provide such norms. Or schools can go to other sources to obtain research norms with percentile cut-points for
reading fluency (e.g., Tindal, Hasbrouck & Jones, 2005; EasyCBM, 2010) and additional academic areas (e.g., EasyCBM, 2010).

**Case Example: Mrs. Chandler is a 4th-grade teacher in a school whose district has adopted AIMSweb literacy screening tools. The district selected AIMSweb in part because the product includes national norms spanning elementary and middle-school grades that are divided into percentile cut-offs at each grade level.**

2. **Determine Cut-Points on Research Norms That Indicate Optimal Instructional Placement.** Research norms with percentile cut-offs are essential for deciding a student's appropriate instructional match for supplemental intervention. When reviewing its research-derived screening norms, the school sets percentile cut-offs that designate appropriate instructional placement and mastery at each grade level. Shapiro (2008) recommends that, when consulting research norms at any grade level:

- the 25th percentile serve as the cut-point for determining that a student has the minimum academic skills needed to experience success in that material. (Please note, though, that norms from other popular academic screening tools—e.g., easyCBM.com—set the 20th percentile as the minimum-skills cut-point.)

- the 50th percentile should serve as the cut-point for defining that the student has attained ‘mastery’ on the grade-level academic skill.

**Case Example: Using the AIMSweb norms, Mrs. Chandler's school decides that when assessed on literacy screening tools at any grade level, a student will be considered as falling within the instructional range if he or she performs within the 25th to 49th percentile and as having achieved mastery if he or she performs at or above the 50th percentile.**

3. **Find the Target Student's Optimal 'Off-Level' Instructional Match Through a ‘Survey-Level’ Assessment.** The school must next find the struggling student's appropriate ‘instructional match’—the level of task difficulty that will allow the student to experience sufficient success on off-level interventions while also ensuring a monitoring plan that can accurately track the student’s true growth on that intervention. The process used to find the student’s instructional match is called a ‘survey-level’ assessment.

The school administers to the target student a series of standardized curriculum-based measures (CBMs) in the area of academic concern. These CBMs start at the level of the student's current grade placement and work downward, testing the student at successively earlier grade levels.

For each grade-level CBM administered, the teacher scores that 'off-level' CBM and compares the student results to research norms.

- If the student performs at or above the 25th percentile with materials drawn from a particular 'off-level' grade, the teacher judges that the student is likely to experience a good match using intervention and assessment materials at this grade level—and the Survey Level Assessment ends here.

- However, if the student performs below the 25th percentile, it is judged that material at that grade level is too challenging for use in monitoring the student's progress on intervention. The teacher instead continues to administer CBMs from successively earlier grade levels, stopping only at the grade-level at which the student performs at or above the 25th percentile according to the research norms.
Case Example: In January, Mrs. Chandler reviews her classwide reading fluency screening results. She notes that a student who has recently transferred to her classroom, Randy, performed at 35 Words Read Correct (WRC) on the 1-minute AIMSweb Grade 4 fluency probes.

Mrs. Chandler consults AIMSweb reading-fluency research norms and finds that a reasonable minimum reading rate for students by winter of grade 4 (25th percentile) is 89 WRC. Because Randy’s reading fluency rate is so far below the grade-level norms (a gap of 54 WRC), his teacher decides to conduct a Survey Level Assessment to find the student's optimal grade level placement for supplemental reading instruction.

- On Grade 3-level probes, Randy attains a median score of 48 WRC. The AIMSweb winter norm (25th percentile) for a 3rd grade student is 69 WRC. The student is still in the ‘frustration’ range and the Survey Level Assessment continues.

- On Grade 2-level probes, Randy attains a median score of 64 WRC. The AIMSweb winter norm (25th percentile) for a 2nd grade student is 53 WRC. The student is now in the ‘instructional’ range and the Survey Level Assessment ends.

4. **Determine an 'Off-Level' Progress-Monitoring Goal Based on Norms.** To set an intervention progress-monitoring goal, the teacher looks up and uses the academic performance norm for the 50th percentile at the student's off-level ‘instructional’ grade level previously determined through the Survey Level Assessment.

Case Example: To find the progress-monitoring goal for Randy, his teacher Mrs. Chandler looks up the benchmark Words Read Correct (WRC) for the 50th percentile at Grade 2 on the fall screening norms (Randy's off-level ‘instructional’ grade level)—which is 79 WRC. This becomes the progress-monitoring goal for the student.

5. **Translate the Student's Long-Term Progress-Monitoring Goal into Weekly Increments.** The teacher's final task before beginning to monitor the student's progress on intervention is to translate the student's ultimate intervention goal into ‘ambitious but realistic’ weekly increments. A useful method (Shapiro, 2008) for determining weekly growth rates is to start with research-derived growth norms and to then use a ‘multiplier’ to make the expected rate of weekly growth more ambitious.

The teacher first looks up the average rate of weekly student growth supplied in the research norms.

- If available, a good rule of thumb is to use the growth norms for the 50th percentile at the ‘off-level’ grade at which the student is receiving intervention and being monitored.

- If a screening tool's academic-performance norms do not also include growth norms, schools can compute the 'typical' rate of weekly progress for any grade-level by (1) subtracting the fall screening results (50th percentile) for the off-level grade from the spring screening results (50th percentile) and (2) dividing the difference by 32—representing the typical 32 weeks that separate fall and spring screenings in most schools. The resulting quotient represents 'average' expected rate of student progress per instructional week on that academic screening measure at that grade level.

The teacher then multiplies this grade norm for weekly growth by a multiplier whose value falls between 1.5 and 2.0 (Shapiro, 2008). Because the original weekly growth rate represents only a typical rate of academic
improvement, this multiplier is used to boost the target student’s weekly growth estimate to a point at which learning is accelerated and the gap separating that student from peers will likely close if the intervention is successful.

Case Example: Randy, the 4th-grade student, is to be monitored on intervention at grade 2. Mrs. Chandler finds—using AIMSweb norms—that a typical student in Grade 2 (at the 50th percentile) has a rate of improvement of 1.1 Words Read Correct (WRC) per week. Based on her own judgment, Mrs. Chandler selects 1.8 as her multiplier—although any figure between 1.5 and 2.0 would be acceptable. She multiplies the 1.1 WRC figure by 1.8 to obtain an ambitious weekly growth goal for Randy of about 2.0 additional WRCs.

Randy’s ultimate ‘graduation goal’ that would allow him to advance beyond grade 2 as his supplemental intervention level is 79 WRC (the 50th percentile norm for grade 2). During the Survey Level Assessment, Randy was found to read 64 WRC at the 2nd grade level. There is a 15-WRC gap to be closed to get Randy to his goal. At 2 additional WRC per week on intervention, Randy should close the gap within about 8 instructional weeks.

6. Gradually Advance the Student to Higher Grade Levels for Intervention & Progress-Monitoring. The teacher monitors the student’s growth in the target academic skill at least once per week (twice per week is ideal). When, according to the research norms for his or her off-level grade, the student’s performance exceeds the 50th percentile, the teacher reassesses the student’s academic skills at the next higher grade, again using the research-based norms. If the student performs at or above the 25th percentile on probes from that next grade level, the teacher can move the student up with confidence and begin to monitor at the higher grade level. The process repeats until the student eventually closes the gap with peers and is being monitored at grade of placement.

Case Example: His teacher, Ms. Chandler, notes that after 7 weeks of intervention, Randy is now reading 82 Words Read Correct (WRC)—exceeding the 79 WRC for the 50th percentile of students in Grade 2 (winter norms). So Mrs. Chandler assesses Randy on AIMSweb reading fluency probes for Grade 3 and finds that he reads on average 72 WRC —exceeding the 3rd grade 25th percentile cut-off of 69 WRC. Therefore, Randy is advanced to Grade 3 progress-monitoring and his intervention materials are adjusted accordingly.

Recommendations for using this approach: Research norms for student performance and academic growth are the ‘gold standard’ in off-level goal-setting, as they provide fixed, external standards for proficiency that are not influenced by variable levels of student skill in local classrooms. When setting academic goals for struggling students, schools should use research norms whenever they are available. In particular, research norms should be used for high-stakes RTI cases that may be referred at some point to the Special Education Eligibility Team.

References


RTI Data Challenge: Setting Individual RTI Academic Goals Using Research Norms for Students Receiving 'Off-Level' Interventions: Example

The scenario below requires that a school follow best-practice guidelines (Shapiro, 2008) for setting academic goals for students who are receiving 'off-level' interventions.

**Comparing Student Performance to Benchmarks and Identifying Severe Discrepancies.** A school adopted universal RTI screening/progress-monitoring tools from EasyCBM (http://www.easycbm.com). When the school-wide screening was conducted in the fall, the school discovered that a 5th-grade student, Alicia, was substantially delayed on the Passage Reading Fluency (PRF) task. Alicia read only 45 words per minute on the passage.

Q: Consult the Grade 5 Fall screening table and find the Passage Reading Fluency norm for the 20th percentile. Then subtract Alicia’s reading score from that normative value. How much of a gap separates Alicia from her peers in reading fluency?

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Q: Do you judge that this student needs a survey-level assessment to determine the optimal 'off-level' grade for matching Alicia to appropriate progress-monitoring and intervention materials? If so, why?

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**Conducting a Survey-Level Assessment.** Alicia’s performance on the fall Passage Reading Fluency screening triggered a Survey-Level Assessment. Table 1 below shows how Alicia performed on successively easier PRF passages drawn from earlier grades below her current grade placement:

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Words Read Correct/1 Minute</th>
<th>Appropriate Off-Level Grade for Supplemental Intervention?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 4 PRF Passages</td>
<td>51 WRC</td>
<td>___ Y ___ N</td>
</tr>
<tr>
<td>Grade 3 PRF Passages</td>
<td>63 WRC</td>
<td>___ Y ___ N</td>
</tr>
<tr>
<td>Grade 2 PRF Passages</td>
<td>68 WRC</td>
<td>___ Y ___ N</td>
</tr>
</tbody>
</table>
Task: Compare the results of Alicia’s Survey-Level Assessment to the fall easyCBM screening norms. For each grade level at which the assessment was conducted, decide whether the student score falls between the 20th and 50th percentiles (‘Instructional’ range). If so, mark the ‘Y’ blank under the ‘Appropriate Off-Level Grade for Supplemental Intervention’ column; otherwise, mark the ‘N’ blank. NOTE: The highest grade level in which the student performs in the instructional range will be the grade at which the student’s off-level intervention will be aimed and progress-monitoring will be conducted.

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Selecting an ‘Off-Level’ Progress-Monitoring Goal. Once the school had determined the student’s optimal ‘off-level’ grade for intervention and progress monitoring, it next needed to determine the student’s progress-monitoring goal for that grade level.

Task: For the grade level at which you have chosen for Alicia’s ‘off-level’ intervention and monitoring, look up the fall 50th percentile cutscore from the easyCBM norms. Subtract Alicia’s current PRF score on at this grade level (taken from the Survey Level Assessment) from the 50th percentile cutscore to determine the amount of progress the student will need to make to ‘graduate’ to the next grade level.

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Translating the Progress-Monitoring Goal into Weekly Increments. Now that the school had determined the overall gap that Alicia needed to close to advance to the next grade level on Passage Reading Fluency, the school needed to break that overall goal into weekly increments.

First, the school had to find an expected rate of weekly growth on the PRF using the easyCBM norms. Unfortunately, the norms do not list weekly rates of growth. Therefore, the school calculated this figure on its own (described below) using information taken from the norms chart.

The school then converted this ‘average’ rate of progress to a more ambitious one by multiplying the original weekly increment by a figure between 1.5 and 2.0 (Shapiro, 2008).

Because Alicia’s intervention to improve her reading fluency was scheduled to last eight instructional weeks, the school then multiplied the ambitious rate of weekly progress by the number of intervention weeks and added that product to Alicia’s baseline to predict the student’s progress if the intervention were successful.

Task: Compute the ‘typical’ rate of weekly progress at the student’s ‘off-level’ grade by (1) subtracting the fall screening results (50th percentile) for the off-level grade from the spring screening results (50th percentile) and (2) dividing the difference by 32—representing the typical 32 weeks that separate fall and spring screenings in most
schools. The resulting quotient represents ‘average’ expected rate of student progress per instructional week.

Task: Transform the above ‘typical’ rate of weekly progress to an ambitious rate by multiplying the original weekly increment by a figure between 1.5 and 2.0.

Task: Multiply the ambitious rate of weekly progress that you calculated by the eight weeks of Alicia’s intervention. Then add that product to the baseline that you had previously assessed for this off-level grade during the Survey Level Assessment to produce an ‘intermediate’ off-level intervention performance goal.

Advancing the Student to Higher Grade Levels for Intervention and Progress-Monitoring. Once Alicia’s intervention had been in place for 8 weeks, the school discovered that she was now reading 84 Words Read Correct on the Passage Reading Fluency assessment at her ‘off-level’ grade. Because it was still mid-autumn, the school continued to consult the fall easyCBM norms to see if the student had exceeded the 50th percentile (graduation goal). If so, the student could be considered for advancing to the next grade-level for intervention and progress-monitoring. If not, she would continue to be monitored at her current level.

Task: Look up the easyCBM norms for the fall screening in Passage Reading Fluency for Alicia’s ‘off-level’ grade. Decide whether her performance of 84 Words Read Correct exceeds the 50th percentile and therefore whether she would be considered a candidate to advance to the next grade level for intervention support.