What a STAR Sheet is…

A STAR (STrategies And Resources) Sheet provides you with a description of a well-researched strategy that can help you solve the case studies in this unit.

What it is…

Progress monitoring, a type of formative assessment (i.e., frequent evaluation), is often used to evaluate student learning. Though there are a number of methods for monitoring a student’s progress, the most widely used is curriculum-based measurement (CBM), the type that will be discussed in this case study set.

Progress monitoring:

• Consists of the frequent administration—for example, once per week—of brief probes or tests (e.g., one-minute reading passages) that give teachers immediate feedback on the skills currently being taught
• Uses probes (i.e., tests) that measure the critical skills that the student must master by the end of the year
• Allows teachers to assess student learning soon after instruction and to implement instructional changes based on these data

What the Research and Resources Say…

More than 30 years of research have proven the benefits of monitoring a student’s progress in reading:

• Students of teachers who use progress monitoring achieve higher grades than do those whose teachers do not. (Fuchs, Butterworth, & Fuchs, 1989)
• Students are more aware of their performance and view themselves as more responsible for their learning when they graph their progress monitoring data. (Davis, Fuchs, Fuchs, & Whinnery, 1995)
• Students learn more when teachers implement progress monitoring. (Safer & Fleischman, 2005)
• By monitoring students’ progress, teachers can make instructional changes to improve the academic growth of all students, including those who are struggling with reading. (Fuchs & Fuchs, 2007)
• Progress monitoring data are strongly predictive of student achievement on state and local standardized achievement tests. (Good, Simmons, & Kame’enui, 2001)

Steps for Implementation

1. Select appropriate probes (i.e., tests) for the student’s grade and skill level.
2. Administer and score the probes at regular intervals (i.e., weekly, bi-weekly, or monthly).
3. Graph the scores.
4. Set goals.
5. Make instructional decisions based on the progress monitoring data.
6. Communicate progress with the student, parents, and other education professionals.
Connection to RTI

Frequent progress monitoring is a key component of each RTI tier (or level).

- **Tier 1**: Progress monitoring probes may be used for the universal screening measure, which identifies students who might be struggling academically. Progress monitoring is then used to monitor said students for five to eight weeks to determine whether they would benefit from Tier 2 instruction, a more intense and targeted level of instruction.

- **Tier 2**: Progress monitoring is used to determine whether a student is responding adequately to the intervention.

- **Tier 3**: In a three-tiered model, when Tier 3 is special education, progress monitoring is used to determine whether a student is meeting IEP goals and whether the teacher needs to make instructional changes. Progress monitoring data can also be used to help determine whether the student could be successful in Tier 1 or Tier 2.

Keep in Mind

- Probes can be administered quickly.
- Each probe includes sample items reflecting the critical skills in the reading curriculum across the year.
- Each probe consists of different items or passages of equal difficulty (i.e., equivalent alternate versions).
- Teachers can track their students’ growth throughout the year and make appropriate instructional changes as needed.
- Progress monitoring can be implemented with the entire class or with select students.
- Teachers can also use progress monitoring to evaluate the effectiveness of their current instructional methods. Students who receive high-quality instruction typically demonstrate increased reading performance levels and rates of growth across the year.
- Some sources of progress monitoring probes offer non-English language versions for linguistically diverse students and large-print versions for students with visual disabilities.
- Most commercially available probes include evaluation criteria (i.e., recommended rates of growth for each measure and by grade level).
- The National Center on Student Progress Monitoring has reviewed a variety of commercially available progress monitoring tools (http://www.studentprogress.org/chart/chart.asp).

If you would like more information on progress monitoring, please view the IRIS Modules:

- *Classroom Assessment (Part 1): An Introduction to Monitoring Academic Achievement in the Classroom*
- *Classroom Assessment (Part 2): Evaluating Reading Progress*

http://iris.peabody.vanderbilt.edu
Examples of Progress Monitoring Probes

The table below contains examples of the Vanderbilt University probes for different grade levels.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Type of Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>Letter Sound Fluency: The student is given a sheet of randomized letters and asked to say as many sounds corresponding to the letters as possible in one minute. This test must be administered to each student individually.</td>
</tr>
<tr>
<td>First Grade</td>
<td>Word Identification Fluency: The student is asked to read aloud as many words as possible in one minute. Words are randomly selected from a list of the 500 most frequent sight words. This test must be administered to each student individually.</td>
</tr>
<tr>
<td>Mid-First Grade Through Sixth Grade</td>
<td>Passage Reading Fluency: The student reads a passage aloud for one minute. The passage’s difficulty is based on the student’s expected end-of-year reading competence. The score is the number of words he or she read correctly per minute. This test must be administered to each student individually.</td>
</tr>
<tr>
<td>Fourth Grade Through Sixth Grade</td>
<td>Maze Fluency: The student reads a passage silently for two-and-a-half minutes. In the passage, every seventh word has been deleted and three possible choices offered. The student circles the word that best fits the meaning of the phrase or sentence in the passage. The student’s score is the number of correct replacements he or she makes. This test can be administered to a group of students.</td>
</tr>
</tbody>
</table>

Resources


http://iris.peabody.vanderbilt.edu
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What it is …

Administering a probe consists of the procedures a teacher follows when he or she asks a student to respond to the measure, including the directions the teacher gives to the student and the actions the teacher takes (e.g., timing the student’s responses). Scoring a probe involves determining how many correct answers the student gave.

What the Research and Resources Say…

- Student performance on progress monitoring probes is strongly correlated to national standardized tests. Rather than waiting until the end of the year to review the test results and determine whether their teaching methods are effective, teachers can track their students’ growth throughout the year. (Deno, 2003; Ardoin et al., 2004)
- One must exercise caution when using progress monitoring with English learners (ELs). Low progress monitoring scores may indicate problems with language acquisition rather than difficulties with reading. (Klingner, Artiles, & Méndez Barletta, 2006)
- The way in which teachers administer and score progress monitoring probes is important because incorrect administration can lead to incorrect and misleading conclusions. In order to keep the probes reliable, teachers must give the same directions each time they administer them. In order to maintain the validity of the measure, it must be scored as its creators intended. By doing so, teachers can measure students’ reading growth relative to other students. (Shinn & Shinn, 2002)

Keep in Mind

- Commercially available probes include detailed administration and scoring procedures.
- The probes themselves, their administration, and their scoring are standardized to produce reliable and valid scores.
- Teachers must follow the administration and scoring procedures outlined for the specific probe they are administering. Some training may be required if probes are to be administered and scored in a reliable fashion.

Tips for Implementation

- Before a teacher can administer and score reading probes, he or she must first gather the appropriate materials. These include a stopwatch that displays seconds, a pen or pencil, a student form, a teacher form, and graphing materials or computer software to plot scores.
- A teacher should collect all of the probes to be used throughout the school year as soon as the reading level of his or her students is determined.
• A teacher should schedule administration of progress monitoring probes as a regular part of the students’ routine.
• Many commercially available probes offer software to administer and score the probes.
• To check administration and scoring reliability, teachers can occasionally trade-off administering and scoring probes for each other’s students.

Examples of Probes

• In general, the type of probe a teacher administers is related to the student’s grade level.
• Different reading skills are assessed with grade-level probes. Below are some examples of Vanderbilt University probes.

Example of How to Implement

The administration and scoring rules for each probe differ slightly. The literature that accompanies commercially available probes includes administration and scoring instructions. In general, most probes are administered for one to three minutes and are scored by counting the number of words or letters identified correctly. Below are examples of the administration and scoring of the Vanderbilt Passage Reading Fluency probe.

<table>
<thead>
<tr>
<th>Word Identification Fluency</th>
<th>Passage Reading Fluency</th>
<th>Maze Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>first grade</td>
<td>mid-first–sixth grade</td>
<td>fourth–sixth grade</td>
</tr>
</tbody>
</table>

(Adapted from *Using CBM for Progress Monitoring in Reading*, by L. S. Fuchs and D. Fuchs, 2008.)
Administration

Teacher: I want you to read this story to me. You’ll have one minute to read. When I say “begin,” start reading aloud at the top of the page. Do your best reading. If you have trouble with a word, I’ll tell it to you. Do you have any questions?

(Student reads, teacher keeps time and marks the teacher form for scoring.)

It was Saturday morning and Ellie wanted to go see a movie.

She asked her father if he would take her downtown. “Sure,” said Dad.

“I have to go in to work anyway. It will be right on my way.”

Ellie called her friends Beth, Katie, and Laura to see whether

they could go. They said yes. They went to Ellie’s house. There they

all got into Dad’s car. Then Dad drove to the movies.

(Adapted from Using CBM for Progress Monitoring in Reading, by L. S. Fuchs and D. Fuchs, 2008.)

Scoring

To compute the number of words a student reads correctly, teachers use the following scoring rules:

- Words read correctly are scored as correct.
- A number is counted as a word.
- Words that are mispronounced, omitted, substituted, or reversed (including proper names) are counted as errors.
- Repetitions and insertions are ignored.
- If the student self-corrects within three seconds, the word is counted correct.
- If the student hesitates for longer than three seconds, the word is provided by the teacher and counted as an error.
It was Saturday morning and Ellie wanted to go see a movie.

She asked her father if he would take her downtown. “Sure,” said Dad.

“I have to go in to work anyway. It will be right on my way.”

Ellie called her friends Beth, Katie, and Laura to see whether they could go. They said yes. They went to Ellie's house. There they all got into Dad's car. Then Dad drove to the movies.

Score = 71 (out of a possible score of 73 words read correctly)

Resources


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What it is…

Graphing is a method of recording a student’s scores for each probe and is an integral part of progress monitoring.

What the Research and Resources Say…

- Students are more aware of their performance, view themselves as more responsible for their learning, and are more motivated to learn when they graph their own progress monitoring data. (Davis, Fuchs, Fuchs, & Whinnery, 1995; McLane, “Integrating”; McLane, “Fact Sheet”)
- Students who graph their own data are motivated to improve their academic performance. (Safer & Fleischman, 2005)
- Teachers are able to make quicker instructional decisions by looking at a student’s graph than they are when they rely on a list of scores. (Fuchs and Fuchs, 2008)
- A graph of progress monitoring data is a great tool for communicating with a family or other professionals about a student’s performance. (McLane, “What Is?”; McLane, “Fact Sheet”)

Keep in Mind

Graphing a student’s progress monitoring data is beneficial for both teachers and students.

<table>
<thead>
<tr>
<th>Benefits for Teachers</th>
<th>Benefits for Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Allows teachers to monitor a student’s progress</td>
<td>• Gives students a visual representation of their progress</td>
</tr>
<tr>
<td>• Offers the teacher a means to evaluate the</td>
<td>• Shows students (through specific feedback) that their</td>
</tr>
<tr>
<td>effectiveness of the instructional program</td>
<td>hard work pays off</td>
</tr>
<tr>
<td>• Provides the teacher with a visual aid with which to</td>
<td>• Allows students to set appropriate goals for themselves</td>
</tr>
<tr>
<td>effectively communicate with students as well as</td>
<td></td>
</tr>
<tr>
<td>parents and other professionals</td>
<td></td>
</tr>
</tbody>
</table>

Tips for Implementation

- Although teachers can create their own progress monitoring probes and graphs, many teachers and schools elect instead to purchase them. Progress monitoring graphing software graphs student data and helps interpret that data for teachers. However, it is important for teachers to be able to read a graph and plot the data, especially if the teacher wants to encourage his or her students to graph their own data using graph paper or a teacher-created graph.
Every time a progress monitoring probe is administered and scored, it is recorded on a progress monitoring graph. The vertical axis (y-axis) represents the range of possible scores a student can obtain on the progress monitoring probe (e.g., number of words read correctly). The horizontal axis (x-axis) represents the number of weeks of instruction.

A line can be drawn to connect each data point so that a student’s progress can be easily viewed over time. A dotted vertical line is drawn whenever a change in instruction occurs, indicating when the new instruction began. As further data is collected they are plotted on the same graph, allowing a comparison of the student’s performance with the different instructional approaches. For example, a dotted vertical line is drawn when a student begins Tier 2 instruction.
The range of scores varies for each type of measure. Therefore, when creating graphs for students to use, teachers need to know the probe’s range of possible scores. For example, the chart below lists the range of scores for each Vanderbilt University measure.

<table>
<thead>
<tr>
<th>Range of scores for Vanderbilt University Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Sound Fluency</td>
</tr>
<tr>
<td>Word Identification Fluency</td>
</tr>
<tr>
<td>Passage Reading Fluency</td>
</tr>
<tr>
<td>Maze Fluency</td>
</tr>
<tr>
<td>0–100</td>
</tr>
<tr>
<td>0–100</td>
</tr>
<tr>
<td>0–200</td>
</tr>
<tr>
<td>0–60</td>
</tr>
</tbody>
</table>

Because progress monitoring data are collected frequently, it may be helpful to establish a routine time to collect and graph it so as to limit the disruptions to other scheduled activities.

**Example of How To Graph Data**

Scenario: During week 7, Alex scored 23 on the Vanderbilt University Maze Fluency probe.

Step 1. Locate week 7 on the x-axis.
Step 2. Locate 24 on the y-axis.
Step 3. Place a mark where the two points intersect.
Step 4. Draw a line from the last data point to the current data point.
Resources


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**Goal setting** involves the teacher’s determining an academic benchmark that the student should obtain by a certain time. This goal (or benchmark) is often established by the measure being used. Assessing student performance (i.e., response to instruction) involves reviewing a student’s progress monitoring graph and evaluating his or her performance in relation to the established goal. Once a student’s data have been graphed, teachers can use the relationship between the data points and the goal line to make instructional decisions.

What the Research and Resources Say…

- For goal setting to be effective, a student must be aware of what kind of progress he or she is making toward meeting his or her goal. (Johnson & Graham, 1990)
- Goal setting and graphing progress monitoring data motivates students to improve their performance. (Pemberton, 2004)
- Progress monitoring can promote a student’s success in obtaining goals. By recording the data and the goal on a graph, students have immediate feedback on their performance and how it compares to where they started and where they want to be. (Reid & Lienemen, 2006)
- In order to assess a student’s performance, it is critical to be able to compare a student’s current progress to his or her prior progress and to the expected performance level for the group. (Speece, n.d.)

Tips for Implementation

**Goal setting**

- It is crucial to identify both the expected end-of-the-year goal and the amount of growth expected in shorter periods of time (e.g., weekly goals).
- Commercially available progress monitoring measures have standardized end-of-year performance goals (benchmarks). The table below outlines such goals for the Vanderbilt University measures.
<table>
<thead>
<tr>
<th>Grade</th>
<th>Measure</th>
<th>End-of-Year Performance Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>Letter Sound Fluency</td>
<td>40 letter sounds per minute</td>
</tr>
<tr>
<td>1st</td>
<td>Word Identification Fluency</td>
<td>60 words correct per minute</td>
</tr>
<tr>
<td>2nd</td>
<td>Passage Reading Fluency</td>
<td>75 words correct per minute</td>
</tr>
<tr>
<td>3rd</td>
<td>Passage Reading Fluency</td>
<td>100 words correct per minute</td>
</tr>
<tr>
<td>4th</td>
<td>Maze Fluency</td>
<td>20 correct replacements per 2.5 minutes</td>
</tr>
<tr>
<td>5th</td>
<td>Maze Fluency</td>
<td>25 correct replacements per 2.5 minutes</td>
</tr>
<tr>
<td>6th</td>
<td>Maze Fluency</td>
<td>30 correct replacements per 2.5 minutes</td>
</tr>
</tbody>
</table>

- Once the teacher has determined an academic goal that the student should obtain by the end of the year, he or she is ready to:

  1. Indicate the end-of-year goal or the short-term goal on the student’s graph with an X. In the illustration below, the short-term goal is 60 words per minute (wpm).
  2. Determine the median (middle) of the first three scores. To do this, rank order the scores from lowest to highest. In the illustration below, the first three scores are week 1 – 40 wpm, week 2 – 42 wpm, and week 3 – 43 wpm.

    40
    
    42
    
    43

    42 wpm is the median score.

  3. Regardless of at which week the median score occurs, locate the intersection of the median score, and the goal line will begin at this point. (Note: In the illustration below, the median happens to occur at week 2.)
  4. Draw the goal line between the median of the first three scores and the short-term goal.
Assessing Student Performance

Once the goal line has been established, the teacher can assess a student’s progress for the remainder of the school year. After the administration and scoring of each probe, the score is added to the graph. The teacher can now use the four most recent data points to assess the student’s performance (the Four Point Rule) using the general guidelines below.

<table>
<thead>
<tr>
<th>Above the Goal Line</th>
<th>Below the Goal Line</th>
<th>Around the Goal Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>The student’s performance is exceeding expectations and a slightly more ambitious goal is needed.</td>
<td>The student is not meeting expectations. Something isn’t working and a different instructional approach should be implemented.</td>
<td>The student is on target to meet the year-end goal.</td>
</tr>
</tbody>
</table>
Keep in Mind

- Each commercially available product recommends a standardized benchmark for each measure and for each grade level.
- Because goals that take a long time to accomplish may stifle motivation, it may be beneficial to string together a series of short-term goals as a means of working toward a longer-term one.

Resources


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What it is...

Communicating with parents within the context of RTI involves keeping parents informed of their child’s progress or response to instruction.

What the Research and Resources Say...

• There is increasing evidence that family involvement is one of the most important—if not the most important—factors in ensuring a child’s academic success. (National Coalition for Parent Involvement in Education, 2006)
• Communicating a student’s progress to his or her parents promotes collaboration between the family and the school. (Pemberton, 2004)
• Teachers can more effectively describe a student’s performance to his or her parents by using progress monitoring data. (Pemberton, 2004)

Tips for Implementation

• Provide families with information about the core instruction and interventions being implemented.
• Meet with parents when major instructional changes are made or when a more intensive level of instruction (e.g., Tier 2) is recommended.
• When meeting with parents, focus on specific student needs and bring the student’s progress monitoring graph to interpret for the parents. The graph can:
  ◦ Provide a point of reference for the discussion between the teacher and parents
  ◦ Present a more objective picture of the student’s performance
• Offer translators (as needed) for written and verbal communication.

Keep in Mind

• Ideally, the school should establish communication with all parents at the beginning of the school year to explain the RTI process. If a child is identified as potentially struggling in reading, the teacher should indicate to the parents that their child’s progress will be monitored.
During a parent-teacher meeting, parents are typically interested in three main issues that the teacher can illustrate using the student’s progress monitoring graph:

- How their child is progressing compared to his or her past achievement
- How their child is progressing compared to other students
- What goals their child is expected to meet by the end of the school year

**Example**

Below is Steve’s Tier 1 progress monitoring graph. His teacher, Ms. Doss, has a meeting with Steve’s parents to discuss his progress. The monologue that follows suggests what she might say in this meeting.
“Hi Mr. and Mrs. Lancaster, it’s nice to see you again. Today, I want to discuss Steve’s reading progress, and I am going to use this graph to help us. The last time we met, we talked about the fact that Steve’s score on the universal screening indicated that he was struggling in reading. Since then, I have monitored Steve’s reading performance once a week using a one-minute reading passage. Each week’s score is indicated by a red dot on the graph. This blue line represents how many words Steve should be reading to be on grade level. As you can see, the line increases as the school year progresses because we expect that students will read more and more words each week. During the 10 weeks that I have monitored his performance, Steve has continued to read at the same level (about 5–7 words per minute) instead of the 10-week goal of 19 words per minute. In order for Steve to be reading at grade level by the end of the year, an instructional change may be needed.”

Resources
