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Teaching Tutorial 6: Repeated Readings to Promote Fluency

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Introduction to Reading Fluency

For reading experiences to be enjoyable and meaningful, students must be able to orchestrate skills in word reading, vocabulary, and comprehension with accuracy and ease. This challenge has lead to varying definitions for reading fluency, the skill many have called the "gateway skill" to meaningful reading. Although consensus about a definition of fluency eludes reading educators, these definitions provide a working understanding of the concept:

- "Accurate reading at a minimal rate with appropriate prosodic features and deep understanding" (Hudson, Mercer, & Lane, 2000, p. 16);

- "Reading fluency refers to efficient, effective word recognition skills that permit a reader to construct meaning of text. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension" (Pikulski & Chard, 2005, p. 3);

- "The ability to read connected text rapidly, smoothly, effortlessly, and automatically with little conscious attention to the mechanics of reading, such as decoding" (Meyer & Felton, 1999, p. 284).

Common across all of these definitions is the importance of (a) accuracy in word recognition; (b) a focus on comprehension; and (c) the facility or ease with which both of these processes work together. Because of its dependence on accurate word reading, fluency is also contingent on the skills necessary to develop word reading, namely language and vocabulary skills, phonemic awareness, depth of decoding skills, and a range of prior reading and instructional experiences. Proficient readers are so automatic with each of these component skills, that they are able to focus their attention on constructing meaning while reading (Kuhn, 2008; Kuhn & Stahl, 2000).

It is important to note that students need to develop fluent recognition of individual words as well as fluent decoding of connected text. Fluency at the word level, often discussed as automaticity, is heavily influenced by a student's basic decoding or word analysis skills. Fluency at the passage level builds on that skill and becomes closely linked to comprehension of the content of material being read. This tutorial focuses on promoting fluency at the passage level. In limiting the scope of the tutorial, we do not mean that fluency at the word level—or even at the level of saying individual sounds for letters—is unimportant. Fluency in reading individual words is essential for building fluency at the passage level. Developing word level fluency is simply a topic for a different tutorial.

Two interrelated issues linked to fluency are prosody and reading speed. Reading prosody, or the skill of reading aloud with proper intonation, phrasing, and expression is commonly viewed as a byproduct of well-developed fluent reading. Some have emphasized the importance of prosody by recommending that instructional time and assessment should focus on this skill; however, it is difficult to assess something that is subjective in nature (i.e., prosody). Rasinski (2004) reframed prosody by explaining that reading with prosody indicates that a reader is constructing meaning, demonstrated by reading with expression, through accurate and efficient word reading and coordinated comprehension skills and strategies. The most common measure of fluency, oral reading fluency or ORF (see Lembke & Busch, 2004), involves calculating the number of words a student reads correctly in a one-minute sample of passage reading. Consequently, many people equate fluent reading erroneously as speed reading. We believe Samuels (2006) explains it best when reflecting on the research-base when he stated that "the essence of fluency is not reading speed or oral reading expression, but the ability to decode and comprehend text at the same time" (p. 9).

Even though fluent reading isn't sufficient for being a proficient or strong reader, the research is clear that fluency is necessary for successful reading because of the prominent role it plays in comprehension (Fuchs, Fuchs, & Hosp, 2001). If a reader has to spend too much time and energy decoding individual words, she will be unable to concentrate on what the words mean (Coyne, Kame'enui, & Simmons, 2001). Struggling readers are often identified by their inaccurate and halting approach to reading connected text, which inhibits their understanding of what they have read. In addition, struggling readers often avoid reading when possible. Their limited word-identification skills and minimal time spent reading negatively affect their vocabulary and comprehension skills. Without intervention, the trajectory of growth for non-fluent readers is likely to be flat, which predicts long-term reading difficulties that, in turn, are likely to affect other academic domains.

Fluency is necessary for successful reading because of the prominent role it plays in comprehension.

Historically, reforms in reading instructional approaches have been described as a dichotomy in which one approach (e.g., word recognition instruction or a "bottom up" approach) was considered antithetical to the other (e.g., meaning-based instruction or a "top down" approach). We believe the most powerful explanations of how students develop their reading require both of these approaches to be developed simultaneously. While students are developing automatic recognition of letters and words that will allow them to read texts independently, they should be challenged to expand their oral language, academic vocabulary, and listening comprehension. All of these components will continue to play a critical role in their understanding of complex texts as they grow older. Our interpretation of the literature suggests that building reading fluency effectively should require a brief emphasis in most students' lives. For students with learning disabilities, the instructional strategies we suggest here will need to be more systematic and consistent, but should complement rather than supplant overall reading instruction which would include time spent teaching vocabulary and comprehension.

1. What is Repeated Reading?

The most common approach to improving fluency for struggling readers is through the use of repeated reading approaches. Repeated reading refers to having students practice reading passages of text multiple times. As students gain greater familiarity with the words and ideas in a passage by practicing it repeatedly, they begin to read it more fluently. Unfortunately, students rarely have instructional time devoted to building such fluency. Samuels, one of the earliest and foremost proponents of repeated reading, explained the importance of having multiple practice opportunities in this way:

> Basketball players practice jump shots over and over again; musicians practice short musical selections repeatedly. Their goal is to develop skills to a level of fluid accuracy. With enough practice, they do not have to devote much attention to the mechanics of their skills. With enough practice, readers will not have to devote much attention the mechanics of decoding. (1981, pp. 23-24)

With this context, using repeated reading to improve fluency, then, appears straightforward: Give students a passage; have them read it multiple times until their rendition sounds as though they were talking (i.e, with good accuracy and pace); give them a new passage and repeat the process. However, there are important elements of implementing repeated reading that merit consideration by teachers when using this strategy.

2. How Do We Know Repeated Reading is Effective?

Therrien (2004) examined many repeated reading studies completed between the 1990s and early 2000s. He identified four instructional elements related to improved reading fluency and comprehension.

- ***Reading to an adult.*** Although there are many variations to implementation (discussed later), studies where the student reads out loud to an adult at some point during the intervention showed significantly better results than studies in which the student read to a peer.

- ***Clearly stated purpose focused on comprehension.*** Studies where the intervention made it clear that the student's efforts were to improve overall reading proficiency had significantly better results then interventions where this was unclear or if it emphasized rate of reading.

- ***Repeatedly reading passages 3-4 times.*** Interventions in which students read three or four times produced significantly better effects than interventions in which students read fewer than three times. Additionally, there was no added benefit to reading a passage more that four times.

- ***Establishing a reading goal and providing corrective feedback.*** Studies in which students received corrective feedback on errors resulted in significantly better student outcomes than studies where students simply practiced independently. Additionally, studies in which there was a clearly marked goal in the passage yielded better outcomes than studies without an indication of success for the students to meet.

Therrien provided guidelines for effective repeated reading: Have students (a) read to an adult, (b) focus on comprehension, (c) reread passages 3-4 times, and (d) pursue a goal while receiving corrective feedback.

Therrien (2004) found some aspects of repeated reading for which the results were unclear. He was not able to make definitive recommendations about whether students benefitted from (a) charting their performance regularly, (b) using different methods for reading with peers, or (c) having a model of fluent reading prior to practice. This does not mean that these practices are ineffective; their benefits simply have not yet been unambiguously demonstrated.

3. When Should We Employ Repeated Reading?

Instructional time spent in fluency development has traditionally been one of the most neglected domains of reading. However, due to our growing understanding from the research, this has begun to change. It is critical that all teachers have an overt focus that employs a comprehensive approach to reading instruction including the intertwining of each component reading skill to support students in reading for understanding. Focusing on fluency can often begin much earlier than is sometimes thought. Students are ready to practice developing fluency in connected text when they can:

- Rapidly identify letter-sounds, many regular and irregular words, and read basic sentences;
- Correctly read 20 or more words in one minute; and
- Accurately (> 95%) read connected text (either at or below grade level)

4. What Should Teachers Consider in Designing Repeated Reading Instruction?

For repeated reading to benefit students' fluency, teachers need to consider materials and instructional strategies carefully. Effective fluency building instruction involves three critical factors:

- Selecting appropriate instructional tasks (i.e., passages students can decode accurately but not fluently);
- Scheduling sufficient practice (brief, multiple opportunities per day); and
- Systematically increasing the rate of response (developing individual goals such as 20, 30, 40 words per minute, etc).

Recall that, even though we are focusing on fluency at the passage level in this tutorial, teachers should help students develop fluency at the word level. Automatic or fluent reading of individual words is a critical precursor to fluent reading of connected text and, in fact, to comprehension of word meanings (Perfetti, 1995). For more on teaching fluent decoding of words, see the tutorial by Blachman and Murray (2008).

Considerations in Selecting Materials for Fluency Development

When selecting materials for use in text-level fluency building, two issues should be considered: (a) materials that the student will practice reading with fluency; and (b) materials the student will practice reading with understanding.

- Reading with fluency: Because the student will be re-reading the materials numerous times, the student needs to practice reading accurately; therefore, teachers should select materials that the student can read with high accuracy (> 95%).

- Reading with understanding: Because the goal for reading with fluency is to enable reading comprehension and building vocabulary, materials should be of high interest to the student, yet challenging to the student.

Considerations and Activities Prior to Reading

Samuels described the method of repeated reading in this way: "The method consists of rereading a short, meaningful passage several times until a satisfactory level of fluency is reached. Then the procedure is repeated with a new passage" (1979, p. 377). Put that way, it is quite simple. However, educators have learned more since then, and we can refine the procedure. Here are recommendations that teachers should consider when using repeated reading methods.

- Pre-teach words that are difficult to read and understand. Difficult-to-recognize words (e.g., irregular or unfamiliar words) will be barriers to students' independent reading, so provide practice with those words in isolation before having students begin reading passages containing them.

- Make links to students' background knowledge. Link the content of the text to previous reading, class discussions, or lessons and to local contextually-relevant experiences with which student is more familiar.

- Preview the text content. If content is particularly unique, novel, or challenging for students, provide a brief, general overview of the content prior to having them read it, so comprehension will facilitate fluency.

5. What Repeated Reading Strategies Can Teachers Use to Promote Fluency?

Variations on the basic repeated reading activity provide ways for teachers to break up the practice, so that it does not become monotonous and yet students still get the needed practice.

Although methods for repeated practice of passages share common features, as noted previously, teachers and researchers have developed and tested different variations on repeated reading. These variations provide ways for teachers to break up the practice, so that it does not become monotonous and yet students still get the needed practice. In this section we describe a basic version of the method and two different variations on repeated reading. For more information about each, see the corresponding entry in the list of resources at the end of this tutorial.

Individual Strategy

Howell and Nolet (2000) presented a basic plan for repeatedly practicing reading of passages. They recommended that teachers employ the following six steps.

1. Identify short reading passages (150-300 words) that a student can read with > 95% accuracy;
2. Have the student read for 1-minute as quickly and accurately as possible and determine words correct per minute ('cold reading');
3. Identify and mark a target rate approximately 30% greater than cold reading;
4. Have the student independently re-read the passage with one-minute timer until he or she reaches the target rate (typically with 3-4 readings; if a student does not attain the target after 5 readings, select a new passage);
5. Repeat Step 2, in which the student reads to the teacher, to determine if the target rate was achieved; and
6. Record the scores for both "cold" and "hot" timings on graph paper.

As a supplement to having students repeatedly read passages to themselves to obtain practice, teachers may want to employ other methods to provide practice. One strategy permits a teacher to work with several students in a small group.

Repeated Choral Reading

The Vaughn-Gross Center for Reading and Language Arts in the College of Education at The University of Texas at Austin, provided directions about how to provide repeated reading practice in small groups. With this strategy, teachers model and lead students through reading portions of connected text. The length of the section to read, (i.e., a phrase, sentence, paragraph) is dependent upon the complexity of the text and skills of the readers (e.g., students with less skills read a phrase, more skills a few sentences). The materials for this can vary widely from stories, to worksheets, to directions on worksheets.

Teachers can use an easy, three-step routine when employing the choral reading strategy.

1. ***Teacher Reads.*** Read the material (phrase, sentence, or passage), modeling good fluency and expression and running your finger beneath the words and have the students follow along with their own copies. While modeling, keep a steady pace, chunk the material in manageable units, and pause strategically to ensure that the students are actively tracking in the their materials (i.e., books, worksheets).

2. ***Teacher and Students Read Together.*** After the teacher reads the material once, she should have the students re-read the passage with the teacher. Again, check to ensure that the students are running their fingers smoothly under the words being read. The teacher should monitor to correct errors and provide feedback when needed.

3. ***Students Read.*** After the students practice the material a few times in unison with the teacher, the teacher can have the students re-read the material aloud themselves. The teacher should monitor and provide help and feedback as needed. Upon completion the teacher can then model good comprehension strategies by asking questions or making predictions when appropriate.

Peer or Partner Reading Approaches

Peer or partner approaches represent another method that teachers can employ to increase students' opportunities to practice reading passages repeatedly. Class-wide Peer Tutoring (CWPT; Veerkamp, Kamps, & Cooper, 2007), Peer Assisted Learning Strategies (PALS; Fuchs & Fuchs, 2007), and Reciprocal Peer Tutoring (RPT; Mastropieri et al., 2001) are well-known, researched-based methods to support reading development (see Maheady, Mallette, & Harper, 2006 for overviews). Each of these partner or peer-tutoring approaches has the following similar instructional delivery components.

- They can be incorporated into the regular part of the reading program (completed 2-5 times a week).
- The materials should be carefully selected for student accuracy and interest.
- Students should be trained to use each step of the approach faithfully and the teacher should monitor and support implementation.
- Teachers should pair students strategically (see following discussion).
- Students should read actively (i.e., students read aloud and discuss what they read).
- Teachers should monitor progress regularly (i.e., 1-2 times a month).

Creating Pairs

Hasbrouck (1998) suggested useful guidelines for pairing students, which we have adapted for use with these methods. It is not necessary—it may even be a mistake—for the highest skilled readers to work with the students of greatest need. When pairing students, consider the following:

1. Rank order students according to reading fluency scores or skills;

2. Split the class (from the rank ordered list) into two groups (i.e., highest and lowest halves);

3. Pair the top ranked student in the upper half with the top ranked student in the lower half (i.e., if class has 26 students: #1 with # 13, #2 with #14, etc.);

4. Decisions about pairs should also consider other reading skills and personal relations between students;

5. To maximize instructional time, maintain the same partners for three to four weeks; only adjust pairs when necessary (e.g., when data warrant adjustments or behavior problems arise).

Guidelines for Partner Reading Activities

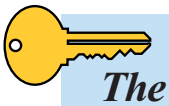
The following issues should be considered if not using an established method or program.

- The teacher needs to select reading material that is appropriate for the less-skillful student in the pair, basing the selection on reading accuracy as well of interest.
  - Create a folder that includes reading passages and graphs for each student and
  - Determine the length of time for the reading activity and lead the group to keep pace brisk (e.g., 1, 3, 5 minutes).

- The teacher should teach both members of the pair all of the steps of partner reading and monitor and coach the students as they complete each of the steps in the procedure:
  - The higher performing student should read first in the reading exchange (providing a model of fluent reading for the lower performing student) while the teacher times the procedure. Then the lower performing student should read the same material;
  - At the end of each brief reading time, the teacher should have the students actively summarize what they just read (e.g., retell main ideas, characters, etc.); and
  - When the students are capable of executing the procedures independently, the higher performing student can score the reading of the lower performing student.

- Students' progress should be monitored to evaluate growth and to determine if student pairs need to be modified.

6. How Do We Evaluate Effectiveness of Instructional Efforts?



The most common, efficient, and reliable way for evaluating reading progress is using curriculum-based measurement procedures that assess performance using oral reading fluency.

As with any intervention, it is important for teachers to assess whether reading fluency practice is improving students' performance. In this section we describe basic procedures for monitoring progress, identify important considerations for assessing effectiveness, and provide examples of what the progress-monitoring practices would look like.

Basic Procedures

The most common, efficient, and reliable way for evaluating reading progress is using curriculum-based measurement procedures that assess performance using oral reading fluency (ORF; see Lembke & Busch, 2004). Teachers simply calculate the number of words read correctly in a minute. When evaluating student performance regularly (i.e., weekly, bi-monthly, monthly) with ORF procedures, teachers should select passages of equal difficulty so that the change in score is a reflection of changing student skill level rather

than an artifact of passage difficulty. Researchers have created sets of materials that include passages of roughly equal difficulty; some are freely available and others cost a modest fee (see section entitled "What Resources can Teachers use to Learn More About Promoting Fluency?").

Even if the materials state that the passages are of equal difficulty, there will be variability from passage to passage. When developing the sets of materials, people use different readability formulae. For this reason, evaluating student performance should be based on trend or pattern of performance across time. With the testing procedure being a one-minute sample of behavior, the score a student receives on a given assessment is very sensitive to the nature of the passage as well as student motivation (as some have said, "We all have a bad minute from time to time"). When teachers monitor performance more frequently (i.e., weekly), they can be more confident in knowing when a student needs an instructional change to maximize learning. To assist in making timely instructional decisions, we recommend graphing ORF scores. Some teachers may have access to programs that do this automatically (see "Chart Dog" in the section entitled "What Resources can Teachers use to Learn More About Promoting Fluency?"), but plotting on simple graph paper is equally effective.

Because of the instability of a single ORF assessment, teachers should examine multiple scores, looking for trend in student performance in relation to an established goal line (see discussion below). A valuable approach is to examine student performance using the Three-point Rule. To employ the Three-Point Rule, look at the most recent three data points collected. If the last three points are above the goal line the teacher should (a) continue the intervention or (b) increase the goal (if performance consistently well above goal line). If the last three points are below the goal line, the teacher should modify the intervention so that it fits the student's needs. If the last three points are around the goal line (points may be on, one below, one above, etc.), the teacher should continue the intervention while closely monitoring student performance.

In selecting the difficulty (grade) level of material for progress monitoring, a teacher should consider how far behind a student is compared to his typically achieving (grade-level) peers. For example, a fifth grader reading 30 words per minute is significantly farther behind than another fifth grader reading 90 words per minute. The materials for progress monitoring for the lower performer would be a lower grade-level than the other student.

The selection of materials is also influenced when evaluating learning trajectories. It is important to focus on two questions about progress: First, is the student progressing and, second, is the student making enough progress?

- ***Is the student making progress?*** Assessments using materials that are closer to the student's instructional level will be more sensitive to skill improvement than assessments using material at the student's grade-level. Teachers should use instructional-level material for more frequent progress monitoring (i.e., weekly, bi-monthly), as ORFs based on them will provide timely feedback on skill development.

- ***Is the student making enough progress?*** Assessments using grade-level materials provide periodic (i.e., monthly) feedback about whether the student's progress is helping her or him catch up to his typically developing peers. These less-frequent assessments provide feedback regarding whether the intervention is intensive enough to significantly alter a student' learning trajectory.

Considerations in Goal Setting

Because learning is a function of the student's skill level and the nature of the instructional support, both should be considered when creating a goal for monitoring progress. If the student is significantly behind and the intervention is being implemented intensively (e.g., 60 minutes), we would expect more growth than if we provided the same student a less-intensive intervention (e.g., 30 minutes). In this section, we discuss two general approaches used in creating goals: normative standards and pre-determined progress rates.

Normative Standards

When a goal is generated using normative standards, student performance is monitored in relation to a percentile standard. For example, if the student is currently performing at the 9th percentile compared to district or national norms in the fall, you may determine what the 9th percentile is in the spring. This would provide a goal that would focus on the student not falling further behind his peers. Another goal, using a normative approach, would be if the student were performing at the 9th percentile in the fall to create a goal that would enable the student to grow faster than peers (e.g., goal of the 20th percentile in spring) thereby closing the gap. Ambitious goal setting has been related to improved student outcomes (Fuchs, Fuchs, & Hamlet, 1989). Normative standards have been developed (see Table 1 for two examples) and many schools or districts have also developed their own local norms. The point is to select a future score (e.g., spring level of performance) in relation to a normative comparison. For example using the Hasbrouck and Tindal norms in Table 1, if a fourth grade student has a 50 on ORF in the fall, she would be reading well below another student whose ORF is at the 25th percentile. A goal could be set for the student to reach the 25th percentile in the spring of fourth grade, meaning performance would be monitored toward a score of 98. For graphing, the fall and spring points would be connected to form a goal line against which student performance would be evaluated. Similar procedures could be completed using lower level materials as well.

Table 1. Normative Scores with ORF by Quartile and Time of the School Year.

		BEGINING		MIDDLE		END	
		DIBELS	Hasbrouck & Tindal	DIBELS	Hasbrouck & Tindal	DIBELS	Hasbrouck & Tindal
Grade 1	25% ile	*	*	13	12	31	28
	50% ile	*	*	27	23	47	53
	75% ile	*	*	51	47	84	82
Grade 2	25% ile	30	25	50	42	75	61
	50% ile	55	51	80	72	100	89
	75% ile	83	79	107	100	126	117
Grade 3	25% ile	59	44	87	62	115	78
	50% ile	76	71	100	92	128	107
	75% ile	93	99	120	120	145	137
Grade 4	25% ile	**	68	**	87	**	98
	50% ile	**	94	**	112	**	123
	75% ile	**	119	**	139	**	152
Grade 5	25% ile	**	85	**	99	**	109
	50% ile	**	111	**	127	**	139
	75% ile	**	139	**	156	**	168
Grade 6	25% ile	**	98	**	111	**	122
	50%ile	**	127	**	140	**	150
	75%ile	**	153	**	167	**	177

* Not Assessed; ** = Not Reported

Based on Hasbrouck and Tindal (2006) and Good, Wallin, Simmons, Kame'enui, and Kaminski (2002).

Pre-Determined Growth Rates

Another approach to setting goals employs growth rates from research studies. For example, as show in Table 2, *typical* rates of progress are 2, 1.5, and 1 words per week in grades 1-3, respectively. However, these rates are in contrast to the growth displayed by the students who grew the *most* in those same grades (last column). Again, teachers should establish goal rates that are ambitious and take into consideration the

intensity of the intervention to be given to the student. To graph progress using pre-determined growth rates, teachers would need to determine the long-term goal to create the goal line. To do this they would need to determine two things:

- The Number of Words to Grow (Growth per Week * Number of Weeks=Words to Grow)
- The Long-Term Goal (Words to Grow + Current Score=Goal)

Table 2. Rates of Progress per Week on Oral Reading Fluency by Group.

Grade	Average	Minimum	Maximum
1	2.10	0.35	4.97
2	1.46	0.71	4.00
3	1.08	0.43	2.43
4	0.84	0.47	1.41
5	0.49	0.04	1.12
6	0.32	-0.22	0.97

Adapted from Fuchs, Fuchs, Hamlett, Walz, & Germann, (1993).

For example, suppose that Jimmy's current ORF score is 28. We want to set an ambitious goal of 2.5 words per week to be evaluated in 22 weeks. First, we would determine the number of words to grow; that would be words per week (2.5) * number of weeks (22) = 55 words to grow. Next, we calculate the long-term goal; that would be words to grow (55) + current ORF (28) = 83. So the goal for Jimmy would be to progress from 28 words per minute (current level) toward a score of 83 words per minute in 22 weeks. See the illustration in Figure 1. Then Jimmy's teacher would collect ORFs and use the *Three-Point Rule* discussed previously to assess whether he was making adequate progress over the course of the 22 weeks.

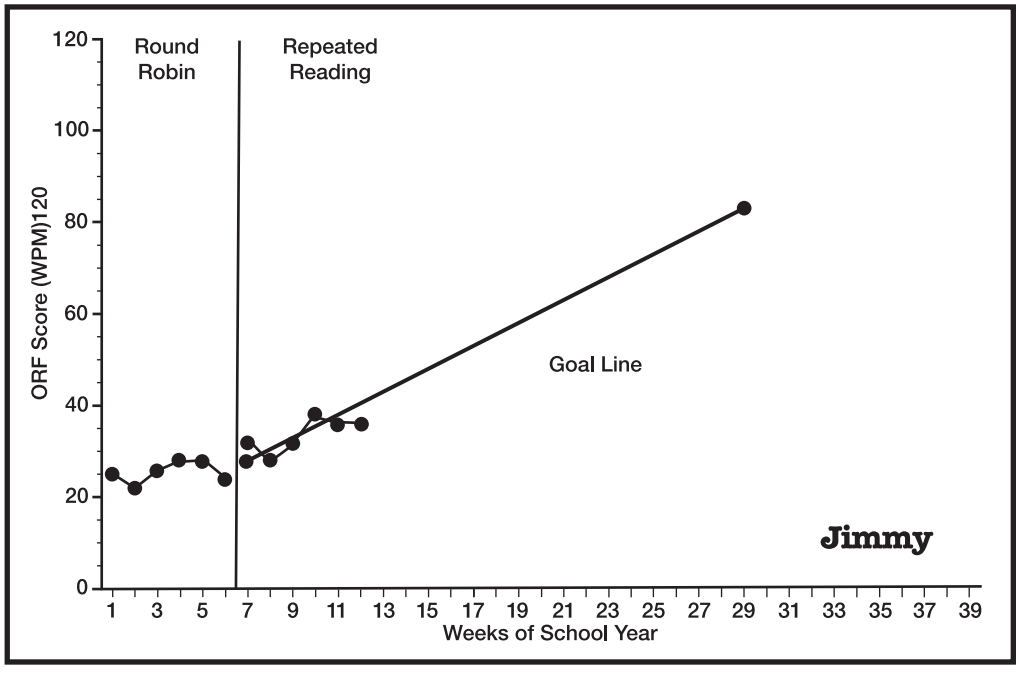


Figure 1

Examining an Individual Student's Performance

By collecting regular reading performance of ORF and examining patterns across multiple readings, teachers can identify individual student's needs. Teachers can use the following questions in making individual instructional decisions for students.

- ***How fluent is the student's reading skills?*** Fluency is determined by examining not only the number of words read correctly, but also accuracy. To determine accuracy, simply divide the number of words read correct by total words read (i.e., 45 words correct / 57 total words = 79% accurate, with 12 errors). *What is the nature of the word reading errors?* Patterns in errors can be determined by recording the mistakes students make while reading and examining the type and frequency of errors recorded. Word reading errors can be easily categorized in the following types: (a) decoding (student attempts to sound out), (b) omissions *(i.e., after 3-seconds of hesitation, the teacher simply supplies the correct word)*, (c) errors that preserve meaning (i.e., word read is highly related to actual text, such as reading "house" for home), and (d) errors that distort meaning (i.e., word read is unrelated to the text, such as reading "dip" when the passage is about dinosaurs). Students will sometimes self-correct (i.e., fix the word reading error within three seconds), which is not counted as an error and is an indication of comprehension monitoring. Also, students may re-read a phrase or word or two, which is not considered an error, but sometimes happens prior to a difficult word or when they feel the passage isn't making sense. See Figures 2 and 3 for examples of reading passages scored in this way.

Tanya's ORF Performance

The Tenth Birthday Party

For his tenth birthday, Carlos wanted to have a party at the	12
neighborhood pool. Together, he and his mother made	20
invitations for the party so that Carlos could send one to each of	33
his friends.	35
On the morning of his birthday, Carlos ran outside to check	46
the weather and was relieved to see a bright blue sky. His mother	59
said, "Well, it looks like a perfect day for a swimming party.	71
Now let's have breakfast, and then we'll get everything ready to	82
take to the pool."	86

Figure 2

Bill's ORF Performance

The Tenth Birthday Party

For his tenth birthday, Carlos wanted to have a party at the	12
neighborhood pool. Together, he and his mother made	20
invitations for the party so that Carlos could send one to each of	33
his friends.	35
On the morning of his birthday, Carlos ran outside to check	46
the weather and was relieved to see a bright blue sky. His mother	59
said, "Well, it looks like a perfect day for a swimming party.	71
Now let's have breakfast, and then we'll get everything ready to	82

Figure 3

- ***What materials can be used in fluency instruction?*** Teachers can use the results of ORF assessments to determine which materials would be appropriate for use in repeated reading sessions. Teachers should select materials that students can read with at least 95% accuracy and more than 20 words correct per minute. To maximize vocabulary and comprehension development and student motivation, we would like students reading as challenging and interesting materials as possible, within this accuracy guideline.

Examples of ORF Assessment

In this section we examine two examples of students with very different reading skills as a way to demonstrate the process of making data-based instructional decisions. Both Tanya and Bill are fourth graders who have similar ORF scores, and their reading performance was shown in Figures 2 and 3.

Although Tanya and Bill both read about the same number of words in one minute from the passage, their performances were quite different. Based on their readings, a teacher could develop a data-based description of their performance and even begin to make some plans for monitoring their progress. Table 3 shows important questions about their reading and how the answers lead to recommendations.

Table 3: Questions and answers for Bill and Tanya's ORF performance.

Questions:	Bill	Tanya
— **How fluent is the student's reading skills?**	Words Read Correct=56 Accurate but slow. He read a total of 59 words with 3 errors (95% accuracy); however, his score is significantly behind where typical fourth graders perform.	Words Read Correct=58 Inaccurate and slow. She read a total of 74 words with 16 errors (78% accuracy); however, her score is significantly behind where typical fourth graders perform.
— **What is the nature of the word reading errors?**	All errors were omissions and he self-corrected 3 times.	Word reading errors that primarily preserved meaning. She appears to guess the word based on the first letter and the context of the passage. Most errors were with multi-syllable words.
— **What materials can be used in fluency instruction?**	Fourth grade reading materials may be appropriate for using in fluency building because he is reading it accurately and may improve vocabulary and comprehension skills.	Fourth grade materials are too difficult for use in fluency building. May try second or third grade materials to determine accuracy and fluency rate.

7. What Resources Can Teachers Use to Learn More About Promoting Fluency?

Materials Related to Fluency Instruction

- Oregon Reading First (reviews and intervention ideas on a range of reading interventions): **http://oregonreadingfirst.uoregon.edu**
- The Iris Center (range of intervention ideas): **http://iris.peabody.vanderbilt.edu/onlinemodules.html**
- Florida Center for Reading Research (range of reading intervention information): **http://www.fcrr.org/**
- University of Texas at Austin (range of reading intervention information): **http://www.texasreading.org/utcrla/**

Progress-Monitoring Materials and Tools

- National Center on Progress Monitoring (Reviews and information on progress monitoring materials): **http://www.studentprogress.org/default.asp**
- AimsWeb/Edformation (Progress monitoring materials for a fee): **http://aimsweb.com/**
- Dynamic Indicators of Basic Early Literacy Skills (Progress monitoring materials for free): **http://dibels.uoregon.edu**
- Intervention Central (Chart Dog Graphing Tool Plus Progress Monitoring Materials): **http://www.jimwrightonline.com/**

References

Blachman, B., & Murray, M. S. (2008). *Decoding instruction.* TeachingLD.org Teaching Tutorial #7. Available from http://TeachingLD.org/members_only/teaching_tutorials.

Fuchs, D., & Fuchs, L. (2007). Increasing strategic reading comprehension with peer-assisted learning activities. In D. S. McNamara (Ed.), *Reading comprehension strategies: Theories, interventions, and technologies* (pp. 175-197). Mahwah, NJ: Erlbaum.

Fuchs, L. S., Fuchs, D., & Hamlet, C. (1989). Effects of alternative goal structures within curriculum-based measurement. *Exceptional Children, 55*, 429-438.

Fuchs, L. S., Fuchs, D., Hamlet, C. L., Walz, L., & Germann, G. (1993). Formative evaluation of academic progress: How much growth can we expect? *School Psychology Review, 22*, 27-48.

Fuchs, L. S., Fuchs, D., Hosp, M. D., & Jenkins, J. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5*, 239-259.

Fuchs, L. S., Fuchs, D., & Maxwell, L. (1988). The validity of informal reading comprehension measures. *Remedial and Special Education, 9(2)*, 20-29.

Good, R. H., Wallin, J., Simmons, D. C., Kame'enui, E. J. & Kaminski, R. A. (2002). *System-wide percentile ranks for DIBELS benchmark assessment.* (Technical Report 9). Eugene, OR: University of Oregon.

Harris, T. L., & Hodges, R. E. (1995). *The literacy dictionary.* Newark, DE: International Reading Association.

Hasbrouck, J., & Tindal, G.A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher, 59*, 636-644.

Howell, K., & Nolet, V. (2000). Curriculum-based evaluation: Teaching and decision making (3rd edition). Stamford, CT: Wadsworth Publishing

Hudson, R. F., Lane, H. B., & Pullen, P. C. (2005). Reading fluency assessment and instruction: What, why, and how? *The Reading Teacher, 58,* 702-714.

Jenkins, J. R., Fuchs, L. S., van den Broek, P., Espin, C., & Deno, S.L. (2003). Sources of individual differences in reading comprehension and reading fluency. *Journal of Educational Psychology, 95*, 719-729.

Kuhn, M. R. (2008). *Effective practices for reading fluency.* TeachingLD.org Hot Sheet #3. Available from http://TeachingLD.org/members_only/hotsheets/.

Kuhn, M. R., & Stahl, S. (2003). Fluency: A review of developmental and remedial practices. *Journal of Educational Psychology, 95*, 3-21.

Lembke, E., & Busch, T. (2004). *Curriculum-based measurement in reading: Oral fluency instruction.* TeachingLD.org Teaching Tutorial #4. Available from http://TeachingLD.org/members_only/teaching_tutorials.

Maheady, L., Mallette, B., & Harper, G. (2006). Four classwide peer tutoring models: Similarities, differences, and implications for research and practice. *Reading & Writing Quarterly: Overcoming Learning Difficulties, 22*, 65-89.

Mastropieri, M., Scruggs, T., Mohler, L., Beranek, M., Spencer, V., Boon, R., & Talbott, E. (2001). Can middle school students with serious reading difficulties help each other and learn anything? *Learning Disabilities Research & Practice, 16,* 18-27

Meyer, M. S., & Felton, R. H. (1999). Repeated reading to enhance fluency: Old approaches and new directions. *Annals of Dyslexia, 49*, 283-306.

National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.* National Institute of Child Health and Human Development, Washington, D.C.

Osborn, J., Lehr, F., & Hiebert, E .H. (2003). *A focus on fluency.* Monograph published by Pacific Resources for Education and Learning. Copies available at www.prel.org/programs/rel/rel.asp.

Perfetti, C. A. (1995). Cognitive research can inform reading education. *Journal of Research in Reading, 18*, 106-115.

Pikulski, J. J., & Chard, D. J. (2005). Fluency: Bridge between decoding and reading comprehension. *The Reading Teacher, 58*, 510-519.

Samuels, S. J. (1979). The method of repeated readings. *Reading Teacher, 32*, 403-408.

Samuels, S. J. (1981). Some essentials of decoding. *Exceptional Education Quarterly, 2(1)*, 11-25.

Schwanenflugel, P. J., Hamilton, A. M., Kuhn, M. R., Wisenbaker, J. M., & Stahl, S. A. (2004). Becoming a fluent reader: Reading skill and prosodic features in the oral reading of young readers. *Journal of Educational Psychology, 96(1)*, 119-129.

Therrien, W.J. (2004). Fluency and comprehension gains as a result of repeated reading: A meta-analysis. *Remedial and Special Education, 25*, 252-261.

Tindal, G., Hasbrouck, J., & Jones, C. (2005). *Oral reading fluency: 90 years of measurement.* Technical Report #33, Behavioral Research and Teaching, University of Oregon, Eugene, Oregon.

Veerkamp, M., Kamps, D., & Cooper, L. (2007). The effects of classwide peer tutoring on the reading achievement of urban middle school students. *Education & Treatment of Children, 30(2)*, 21-51.