PROGRESS MONITORING

STUDY GROUP CONTENT MODULE

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Section 1: Background

Introduction

The purpose of this module is to provide participants with an introduction to procedures for monitoring student reading progress in the classroom based on Curriculum Based Measurement (CBM), and the steps required to implement a system for screening and monitoring students in the area of reading and summary of research on the effectiveness of these procedures. Throughout this module the focus is on students who are not making satisfactory progress and are at risk of failing to develop basic reading skills.

This module is organized into fifteen sections. In addition, a study guide has been developed that complements the information and procedures outlined in this module. [1]

Background

CBM was developed by Stanley Deno, Phyllis Mirkin, and others at the University of Minnesota. The roots of CBM are in the Data-Based Program Modification (DBPM) model created by Deno and Mirkin in the late 1970's. The purpose of this model was to describe how frequent data collection could be used to make educational programming decisions for students in special education. This model and subsequent research program were further developed and investigated as part of the University of Minnesota Institute for Research on Learning Disabilities. The goal of this research was to determine if the use of a formative evaluation system like DBPM would improve teachers' effectiveness in teaching students with learning disabilities and therefore, also improve students' performance (Deno, in press).

In order to develop this formative evaluation, or progress monitoring system, researchers at the IRLD aimed to a) create a set of generic *procedures* for measuring student progress in the core educational skills of reading, spelling, and written expression, and b) establish the reliability and validity of these measurement procedures. In the last twenty years, these measurement procedures have been used by general and special educators across the United States.

[1]**THE PHRASES *PROGRESS MONITORING* AND *CBM* ARE USED SYNONYMOUSLY THROUGHOUT THIS MODULE AND SHOULD BE INTERPRETED AS THE SET OF PROCEUDRES UTILIZED TO MONITOR STUDENT GROWTH IN READING

What is CBM?

CBM is an approach to measuring the growth of student proficiency in the ***core educational skills*** that contribute to success in school. It is a fast, inexpensive, and easy-to-use system that allows teachers to continuously measure their students' growth in performance, determine if their students' are growing at the expected rate, and provide data for teachers to evaluate their instructional strategies if students are not demonstrating adequate growth.

What is measured?

In reading, students' accuracy and fluency when reading aloud from text are assessed.

What is the purpose?
To provide educators with an efficient way to ***evaluate*** the ***effectiveness*** of a student's instructional program.

What are the characteristics of the measures?

- Frequent sampling of performance (e.g., weekly, quarterly, etc.)
- Graphing of progress

What are the ordinary uses of this system?

- Collecting direct, frequent measures of student progress
- Establishing individualized instructional goals
- Using data to make instructional change decisions

Why use this system?
Twenty years of research establishes that:

- These measures reliably and validly describe student growth
- When data regarding a student's progress are used to make instructional decisions, his/her performance is greatly improved

Advantages of this approach:

CBM has several advantages over traditional norm-referenced assessment and other informal measures of student performance in that it is:

- Based on typically used curriculum – most often that used by the school or district
- Individually referenced (an individual's performance is compared to his/her own performance over time)
- Peer referenced (a student's performance is compared to their same-grade peers)
- A tool that can provide teachers with information to make instructional change decisions
- A method that allows for direct and continuous monitoring of student achievement related to expected curriculum outcomes
- Highly sensitive to student growth, detecting even small changes in student performance.
- Time efficient (passages require only one-minute to administer)
- Cost effective (elaborate materials are not needed); and
- A method that produces results that are easier to understand than normative tests using standard scores

Section 2: Screening

An increasingly common use of CBM is to screen students who are "at-risk" for academic failure (Deno et al., 2002). Given that CBM procedures are standardized, they can be used to contrast an individual's performance to that of a group. The use of local norms is common for this purpose, but norms are not required. We have provided criteria that may be used as grade-level benchmarks in Section 8. CBM can be easily and quickly used to assess the performance of a group of students and to identify the lowest achieving, at-risk students in the group (Marston & Magnusson, 1988; Shinn, 1995). Performance goals are set for these students and their progress toward these goals is monitored frequently. If students are not reaching their goals, instruction should be modified to accelerate student progress.

Periodic screening of all students is also recommended. In the same way that teachers set goals for the performance of individual students, it is also helpful to consider and set goals for the performance of an entire class or grade. The typical steps and procedures used in developing a progress monitoring system are as follows:

Steps:

1. Classrooms/grades or grades to participate are identified	Usually determined by classroom teachers or teams
2. Skill/curriculum area are identified	E.g., Reading
3. Measures are created	Oral Reading or maze
4. Students are screened	Students are screened in the Fall
5. Students are ranked and/or school norms are created	Rank students by grade/classroom*
6. Lower-achieving students are identified	E.g., Bottom 40% of students in each grade/classroom are selected*
7. Goals are set	Typically, year-end goals are set for individual students
8. Low achievers are frequently monitored (graph)	Graphing oral reading performance might occur once per week
9. Progress is regularly evaluated	Data are evaluated using a systematic set of decision rules
10. Programs are revised when necessary	Interventions are implemented and, programs are changed in response to the data

11. All students are periodically reviewed Typically, Winter & Spring Oral Reading scores are summarized.

*Depending on the decision made by an individual teacher or school as to whether screening will occur school wide, grade wide, or at the individual classroom level.

Fall Screening

For a Fall Screening, 3 reading passages are typically administered to each student using the directions for administration and scoring described in the sections that follow.

Passages [1]

When teachers create their own reading passages for CBM they select three reading passages of at least 200 words from the end of their grade-level reading curriculum.

If they using generic passages like the Standard Reading Passages Provided for this grant they use 3 grade-level specific screening passages like those provided to you from Children's Educational Services, Inc. (CES) as part of this grant.

[1] **For those who wish to use them, a set of reading passages are being made available to participants in the REA Project. The Standard Reading Passages may be obtained without cost through Children's Educational Services, Inc. (CES). Teachers interested in using the Standard Reading Passages should contact CES at** www.readingprogress.com **and identify the school requesting the passages.**

Section 3: Administering the Reading Probes

The Oral Reading Passages used for progress monitoring are administered individually to students. Students are provided with an unnumbered student copy of a reading passage from which they are expected to read aloud for one minute. Whoever administers the measure scores the student's reading performance on a numbered copy of the same reading passage. The reading passages typically consist of either a short story or a small section of text with a minimum of 150 words.

Administering the Oral Reading Passages requires the following materials:

- One Student copy of the Oral Reading Passage
- One Administration copy of the Oral Reading Passage
- A pen for scoring
- A timer or stopwatch
- The Administration Script
- A clipboard [OPTIONAL]
- A tape recorder [OPTIONAL]

The context for administering the oral reading measures requires that one select a quiet location, such as a corner of the room, to administer the Oral Reading Passages. The student is given the Student copy of the Oral Reading Passage. The Administration copy is positioned in front of the teacher but shielded from the student. A clipboard is often suggested to provide a surface for writing that shields the administration copy. The administration script is followed exactly to ensure that the process is standardized. The directions typically used for CBM are as follows:

Say to the student:

> When I say "please begin" start reading aloud at the top of this page. Read across the page. **[Demonstrate by pointing]** Try to read each word. If you come to a word you don't know, I'll tell it to you. If you get to the end of the page, start over. Be sure to do your best reading. Are there any questions? **[Pause]** Please begin.

Start your timer. If the student fails to say the first word of the passage after *3 seconds*, tell him/her the word and mark it as incorrect. Follow along on your copy. Mark words read incorrectly (see the scoring procedures, Section 4). If the student stops or struggles with a word for *3 seconds*, tell the student the word and mark it as incorrect. If the student reaches the end of the page and does not continue, point to the first word and ask the student to start over. At the end of *1 minute*, place a bracket after the last word read and say:

> Please stop.

Section 4: Scoring Guidelines

When teachers are trained to use CBM procedures questions inevitably arise regarding what to score as correct and incorrect reading of words. The research evidence indicates that no one set of rules regarding correct scoring is technically better than any other set of rules. The fundamental point seems to be that a set of scoring rules should be established and used by all those whose student data are to be aggregated and interpreted. Any set of rules when used consistently will reveal students growth across the school year. An illustrative set of scoring rules and examples is provided below:

Scored As Correct

- **Pronunciations**: A word must be pronounced correctly given the context of the sentence

  Example: The word "r-e-a-d" must be pronounced "reed" when presented in the context of:

  He will read the book WRC = 5

  Not as:

  He will red the book WRC = 4

- **Repetitions**: Repeated words are counted as correct. Words said over again are ignored.

  Example: Ted ran swiftly WRC = 3

  Read as:

  "Ted ran…Ted ran swiftly." WRC = 3

- **Self-corrected words**: Words misread initially but corrected within 3 seconds are counted as read correctly.

  Example: The river was cold. WRC = 4

  Read as:

  "The river was could…(2 seconds)..cold WRC = 4

- **Insertions**: When a student adds extra words, they are not counted as correct words nor as reading errors.

  Example: Sue was happy. WRC = 3

  Read as:

  "Sue was very happy." WRC = 3

- **Dialect/Articulation**: Variations in pronunciation that are explainable by local language norms are not errors.

  Example: They washed the car. WRC = 4

Read as:

"They warshed the car." WRC = 4

Scored As Errors

- **Mispronunciations/Word Substitutions**: Words either mispronounced or substituted with other words are errors.

  Example: The dog ate the bone. WRC = 5

  Read as:

  "The dig ate the bone." WRC = 4

- **Omissions**: Each word omitted is an error

  Example: Mario climbed the oak tree. WRC = 5

  Read as:

  "Mario climbed the tree." WRC = 4

- **Hesitations**: When a student hesitates or fails to correctly pronounce a word within 3 seconds, the student is told the word and an error is scored.

  Example: Mario saw an elephant. WRC = 4

  Read as:

  "Mario saw an… (3 secs)." WRC = 3

  Or read as:

  "Mark saw an ell-ee…(3 secs)." WRC = 3

- **Reversals**: When a student transposes two or more words, those words not read in the correct order are errors.

  Example: Charlie ran quickly. WRC = 3

  Read as:

  "Charlie quickly ran." WRC = 1

Special Scoring Examples

- **Numerals**: Numbers are counted as words and must be read correctly within the context of the passage.

  Example: May 5, 1999. WRC = 3

  Read as:

  "May five, one nine eight nine." WRC = 1

- **Hyphenated words**: Each morpheme separated by a hyphen is counted as an individual word if it can stand alone.

Example: Fifty-seven. WRC = 2

Or:

"Daughter-in-law." WRC = 3

Example: co-opt WRC = 1

Or:

"re-evaluate" WRC = 1

- **Abbreviations**: Abbreviations are counted as words and must be read correctly within the context of the sentence.

Example: Dr. Adams said, "Hello!" WRC = 4

Should be read as:

'Doctor Adams said, "Hello!"' WRC = 4

Not as:

'D-R Adams said, "Hello!"' WRC = 3

For each passage, the total number of words read correctly is recorded. This number is obtained by subtracting the number of words read incorrectly from the total number of words read. In the example that follows, the student read a total of 49 words and made 3 errors, therefore, the number of words read correctly = 46.

Scoring Example:

The following text is an example of a student Oral Reading passage.

MAKING FRIENDS

There once was a little girl named Anne who	**9**
was very shy. She was too shy to make friends.	**19**
Anne lived in an apartment building with her mother	**28**
and brother. Anne liked to play at the playground	**37**
near her apartment building.	**41**
One day Anne was playing on the swings when	**50**

Total words read = 49

Words read incorrectly = 3

Words read correctly = 46

Section 5: Interpreting Screening Data

After three screening passages have been administered to all students, the ***median number of words read correctly*** is recorded for each student. The median score is the "middle" score in a rank order of scores. The median is used because, like the average, it provides a more precise and stable estimate of a student's current level of reading performance.

For example:
If a student's scores on the 3 passages were:
24 words read correctly
38 words read correctly
35 words read correctly

The student's median for number of words read correctly is: 35

An example of what scores might look like for a 2nd grade is below. The median number of words read correctly is bolded and in a box for each student.

Fall Median Baseline Scores—2nd grade

Student	Teacher	# of words read correctly in one minute		
		Passage 1	Passage 2	Passage 3
Sarah Williams	Mrs. Jones	13	**15**	19
Eric Peterson	Mrs. Terry	12	23	**16**
Willie Smith	Mr. Kline	22	**18**	14
Randy Simons	Mrs. Jones	**20**	18	21
Trina Liddell	Mrs. Jones	44	**36**	35
Jimmy Jones	Mr. Kline	34	45	**39**
Tom Thompson	Mrs. Terry	**40**	38	41
Lisa Connors	Miss Lionel	35	**41**	42
Sam Tucker	Miss Lionel	45	56	**49**
Tanisha Johnson	Mr. Kline	45	56	**51**

Monitoring students who are ask risk of reading failure:

In order to determine the students at risk of reading failure, students arerank ordered from lowest to highest using their ***median number of words read correctly***. At this point, a decision must be made regarding the percentage of students who will be monitored routinely . Often, this decision is based on a percentage estimate (say, the lowers 40%) or students are identified because they have not met a benchmark or standard considered to be important by students at a particular grade level. I the bottom 49 % of the class is to be identified, teachers use the rank ordered list of students in their class. They begin with the student who has the lowest median score and count up the list until they reach the number that equals 40% of the class. These would be the students whose performance is monitored frequently (weekly or bi-weekly) throughout the school year. In our example, the students are already rank ordered.

10 students **x** .40 = 4 students

The bottom 4 students are Sarah, Eric, Willie, and Randy. These would be the students the teachers would progress monitor. As you can see, some teachers might be monitoring more students than other teachers.

If teachers are using progress monitoring for an individual class rather than an entire grade, the same procedure is used determine the bottom 40% of students in their class.

Section 6: Selecting Materials for Monitoring

The first task in progress monitoring is to select the passages that will be used to monitor students on a regular basis.

Teachers using passages from their own curriculum
Choose material that the students will encounter throughout the semester. Choosing passages from the end of the grade-level text being used in the classroom is a good approach. Passages should be at least 200 words, and at least18 passages are necessary for monitoring across the school year. It is necessary to keep track of the order in which these passages are administered, perhaps by numbering them 1 through 18. Also, a numbered passage (Administration copy) for scoring (with the cumulative number of words in the passage at the end of each line – an example is provided in Section 4) and one un-numbered passage (Student copy) for the student are created.

In the case of the Standard Reading Passages (from CES) 20 passages specific to each grade level are used and students are monitored in their grade-level passages.

Important Points:

- If a student *cannot* read Grade 1 passages, their prereading growth is typically measured using different measures (e.g., phonemic awareness and isolated word recognition).

- The progress monitoring passages are used during the first semester and then at the beginning of the 2nd semester, teachers start over at the beginning of the set of passages. It is important to administer them in the same order they were administered during the first semester so that is possible to directly compare students' performance during the second half of the school year to their performance on the same passages that were administered during the first semester.

- **Whether teachers use passages from their own curriculum generic passages like the Standard Reading Passages, it is imperative that they use the same three screening passages that were used for Fall Screening in the Winter and Spring reviews of all students.**

Section 7: Deciding How Often to Monitor

A major concern in setting up progress monitoring systems is the frequency of measurement for progress monitoring. Most often that is determined by each individual teacher or school or building leadership team. The general rule is that the more severe the student's reading problem, the more frequently that measurement should occur. The best metaphor is that of medical treatment. We are well aware that as an illness is more serious the frequency with which treatment effects are monitored increases. Intensive care, as we know, involves direct and continuous monitoring of vital signs. The same principle applies to our work with students who whose educational health is fragile. As discussed in Section 1, frequently assessing students' performance and making instructional changes based on this data is the hallmark of CBM.

Monitoring Individual Students:
The following schedule illustrates a schedule for the progress monitoring of individual students in the lowest 40% based on data from a Fall Screening.

1. **Monitor individual students (bottom 40%) every other week by administering 2 passages (using the average of the two passages as the score that is graphed – see section 10).**
2. **Monitor each student in the lowest 40% one time per week with one passage.**

Periodic Review of All Students:
Students in the entire class or grade can again be assessed in the Winter and Spring with the 3 screening passages used for Fall Screening.

Section 8: Setting Goals

Setting Goals for Individual Students:

A key component of successful progress monitoring using CBM involves setting reasonable goals that can be attained by both students and teachers. An important summary of the research on this topic revealed that successfully increasing student achievement was directly related to the degree to which performance goals were ambitious. Those teachers who set more ambitious goals produced higher levels of achievement in their students.

For each individual student you are monitoring, begins with setting an **end-of-year goal**. Progress toward that goal is then represented on a student graphs using a goal line.

As difficult as it may be to project specific statements of how a child will perform at the end of the year, setting goals and measuring progress towards those goals is important. It provides valuable program planning data for the teacher and offers an effective format for communicating pupil progress information to parents and administrators.

To illustrate the importance of setting an end-of-year, or long-range goal, consider the following analogy:[1]

> Suppose you are taking a trip. Contrast the difference between taking that trip having specified your destination and taking the trip with no special endpoint in mind. For example, you leave Seattle this morning with a goal to reach Mexico City by nightfall three days hence, as opposed to merely leaving Seattle. Without a specified destination and projected arrival time, you know neither in which direction to go nor how fast to travel; having established a goal, you know both these facts (head south and really hustle). With this information you can judge whether the direction and the rate at which you are traveling will get you to your final destination on time.

The success of any plan always depends on where you are, where you want to go, and when you want to get there. In teaching, initial assessment information tells \ where we are, while the end-of-year goal identifies where we are going and when we plan to arrive. Below we provide an example of how to set a year-end goal.

[1] Adapted from V. Lynch, C. McGuigan, and S. Shoemaker, "An Introduction to Systematic Instruction" (Unpublished Manuscript, SCAT Child Service Demonstration Center, Boise, Idaho, 1979).

Establishing the end-of-year goal for individual students:

1. Select a goal date
2. Determine the # of weeks until goal date
3. Multiply the number of weeks by the improvement rate selected from the table below
4. Add the result to the median # of words currently read correctly

When determining the weekly improvement rate for students, choose reasonable or ambitious rates of growth.

Weekly improvement rates

Grade	Modest	Reasonable	Ambitious
1-2	**1.0**	**1.5**	**2.0**
3-6	**.5**	**1.0**	**1.5**

End-of-year reading score = number of weeks to goal x improvement rate + current reading score

For example:

To set an ambitious goal for Sam, a second grader who read 12 words correctly on October 16th with 28 weeks left until the end of school:

*28 weeks **x** 2 words per week gain = 56 total words gained*

56 words gained + 12 wrc = 69 words/minute goal

For example:

To set a reasonable goal for Marcy, a fifth grader who read 50 words correctly on November 16th with 24 weeks left until the end of school:

*28 weeks **x** 1 word per week gain = 28 total words gained*

28 words gained + 50 wrc = 98 words/minute goal

Setting Classroom Goals/Establishing Benchmarks:

It is also recommended to establish goals for the performance of an entire class on the Winter and Spring screenings. We recommend using the following criteria:[2].

Grade	Words Read Correctly
1st Grade	60
2nd Grade	90
3rd Grade	115

To determine class progress toward the benchmark, consider the percentage of students that have reached the suggested benchmark for the class using the Median Words Read Correctly.

Consider the following example:

Mrs. Grimsby's First Grade Class Fall Scores – Median Number of Words Read Correctly

Alice	24
Jake	52
Roland	86
Mandy	7
Quinn	95
Zach	10
Danielle	70
Brenda	56
Sydney	101
Sarah	39
Peter	40
Laurie	38

Four students (Roland, Quinn, Danielle, and Sydney) have reached the suggested first grade benchmark of 60 words read correctly per minute.

Progress Toward the Benchmark Goal:
33% of the students have reached the goal in the fall

For the class-wide winter benchmark goal, Mrs. Grimsby decides that her goal will be for 60% of her students to reach the 60 words per minute benchmark at the winter screening. A goal for the spring screening might be that 90% of her students reach this benchmark.

[2] The benchmark criteria have been derived from research. The number of words read correctly for each grade corresponds to high percentages of students passing high stakes assessments in a variety of states and school districts.

Section 9: Establishing a Baseline

A student's baseline score is our best estimate of that student's level of performance at the beginning of progress monitoring. Typically this estimate is obtained by determining the median number of words read correctly on the three screening passages. This, then, is the first data point entered on a student's graph.

Section 10: Graphing and Charting

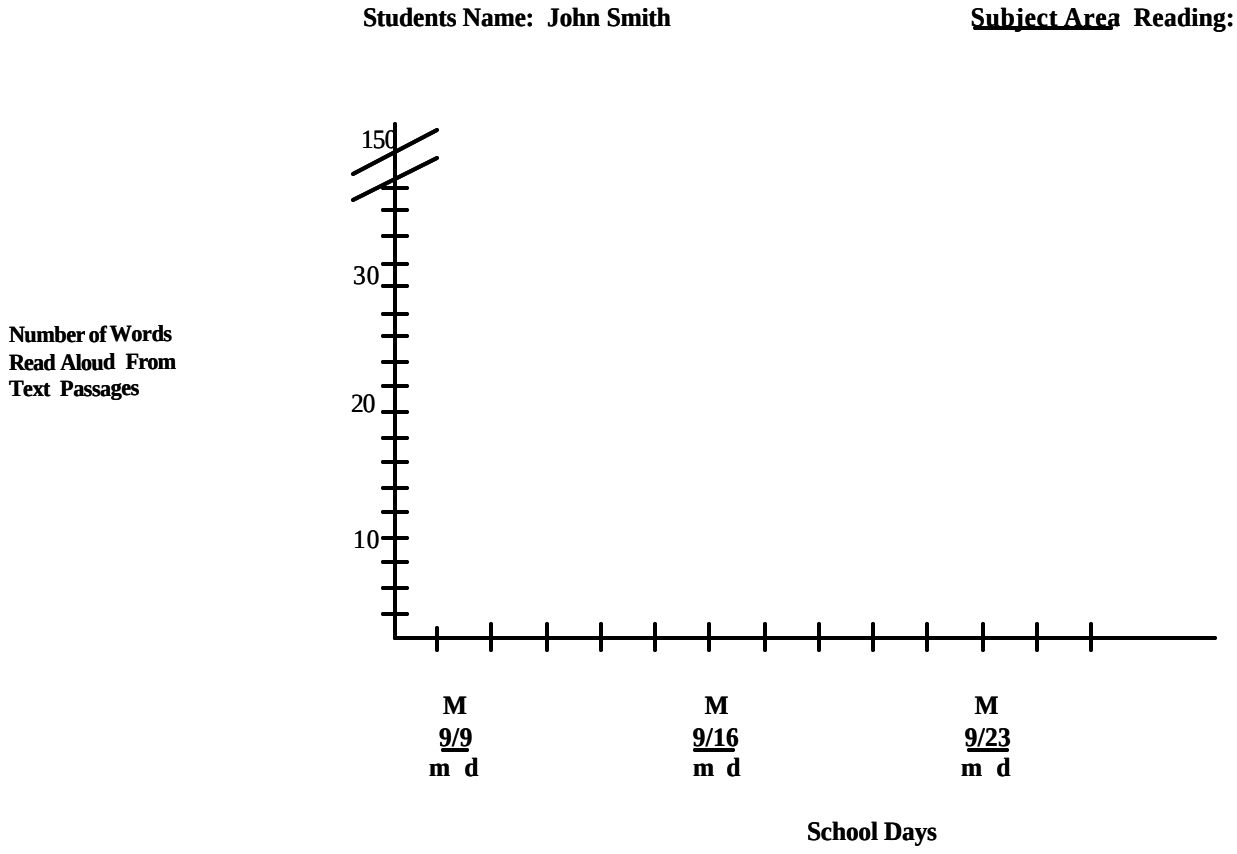
Communicating and interpreting student scores in CBM progress monitoring occurs most easily through graphing student progress. The graph serves as a convenient performance record that is easily understood by teachers, parents, and students. In the following sections we provide directions in how progress graphs are set up and use for recording student scores.

The first step in charting student performance is setting up and labeling a graph for each student. The bottom, or horizontal axis, of the graph is labeled "school days." The graph paper is divided into five-day school weeks, with each heavy line representing Monday. In the space provided below the horizontal axis there is a place to fill in the month (m) and date (d) that corresponds to each Monday (see Figure below).

The left side, or vertical axis of the graph should be labeled "Number of Words Read Correctly," The vertical axis is divided into 75 equal lines. Each line may represent a unit of one or two; therefore, the graph could be labeled from 0 to 75 or from 0 to 150, with each dark line representing a multiple of five or ten. This should suffice for most areas and most students.

The above information is recorded on the graph before charting begins; also write the student's name and the subject area in the spaces provided. An example of a graph that is completely labeled is shown below.

Example of labeled graph



After labeling the graph, place a dot on the graph that represents the student's baseline performance. Next, place a dot on the graph on the last day of monitoring for the school year that represents the student's end-of-year goal. Draw a line connecting the baseline dot and the goal dot. This line is the student's aimline or goal line.

From here, the process of charting involves simply taking the number of words read correctly (or mean number of words read correctly, depending on the monitoring schedule you are using) and placing a dot at the intersection of that level on the vertical axis and the appropriate day on the horizontal axis. It is also helpful to consider the level of accuracy with which students are reading. The number of errors (or median number of errors, depending on the monitoring schedule) is graphed in the same way as the number of words read correctly.

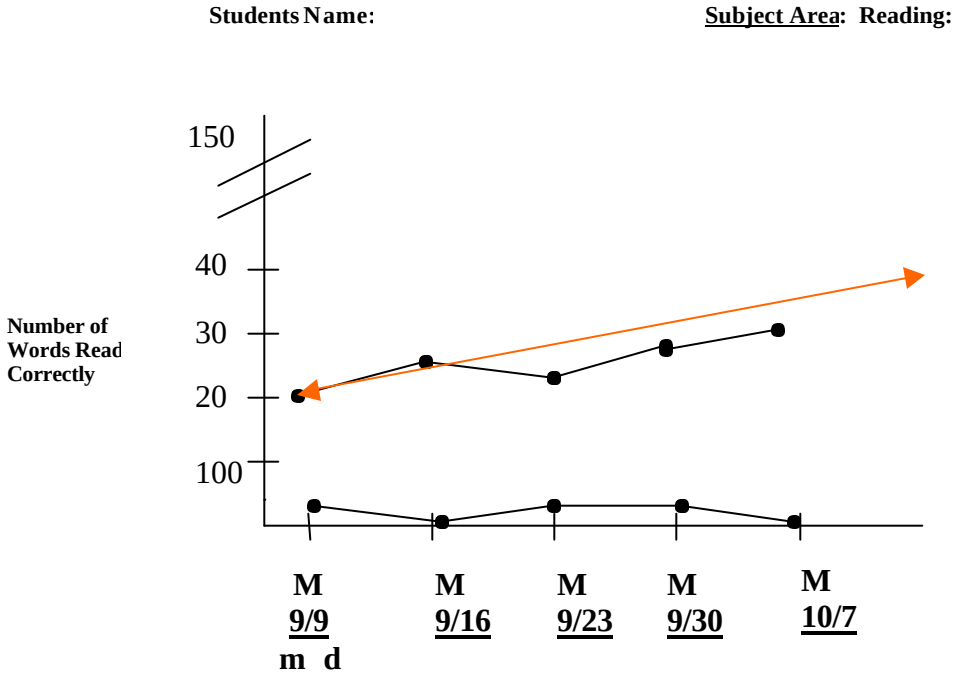
For example:

A student's performance on a one-minute reading task for 3 weeks (monitoring once per week)

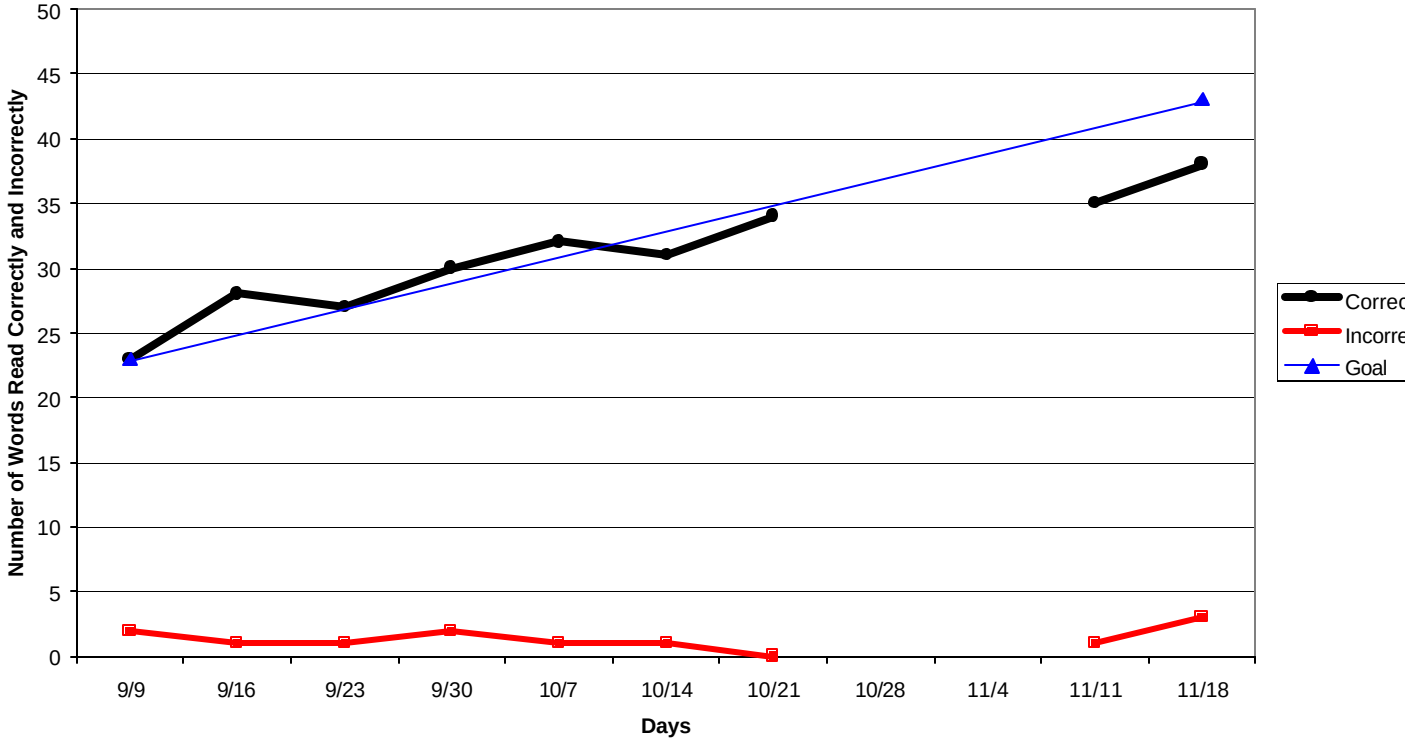
was:

21 words read correctly with 2 errors on Monday 9/9
24 words read correctly with 1 error on Monday 9/16
23 words read correctly with 2 errors on Monday 9/23

A dot is placed at 21 and at 2 above Monday 9/9, at 24 and 1 on Monday 9/16, and so on. To complete the graph, the data points are connected by straight lines (see the example that follows).

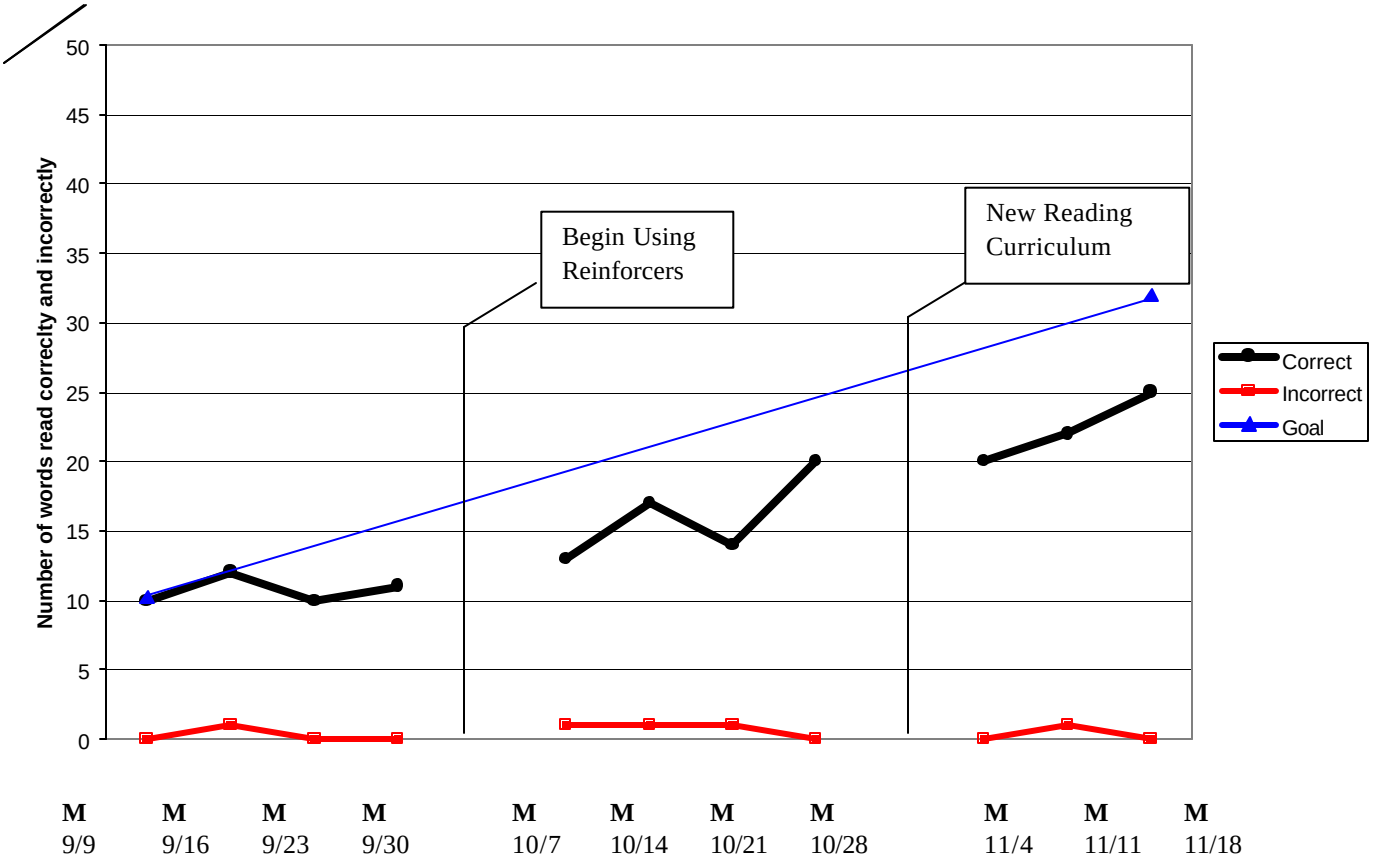


One problem that is likely to arise in measuring students during the school year is the occurrence of days on which the student is absent or measurement did not take place. When there is no word count for a given day, those days should be skipped on the graph and "abs" recorded. Points should be connected with a straight line if there is only one missing data point (representing 1 time of measurement). However, if there are two or more consecutive missing data collection periods, do not connect the data points. The figure below illustrates charted data for a student's performance on a one-minute reading test administered daily, in which data were missing because of a student's absences. The following scores represent the student data charted in the following figure.



The last step in charting involves indicating changes in the instructional program, including new teaching strategies, different curriculum materials, etc. Whenever a student's program is modified in any manner, a vertical line should be drawn from the top of the graph to the bottom and a short note explaining the change included at the top. The below figure is an example of a graph with interventions recorded. Notice that data points are not connected across the vertical line that shows when an intervention occurred.

Students Name: **Subject Area: Reading**



Section 11: Making Instructional Decisions

The history of research on progress monitoring has revealed that student achievement increases only when teachers systematically respond to the data on student performance. To assure the kind of responsiveness that results in improved achievement, it is necessary to use a set of decision rules that direct changes in student's programs. A set of decision rules that has proved successful is described below.

For Individual Students:

After plotting six weeks of data on the students' graphs (either six data points or three data points, depending on the monitoring schedule you are using), review them using the following rules.

Decision Rules

1. **If three consecutive data points are below the goal line, make an instructional change in the student's program.**

2. **If six consecutive data points are above the goal line, make a goal line with a higher goal.**

3. **If the consecutive data points are neither all above or below the goal line, continue with the student's instructional program and monitoring progress.**

For Classroom Benchmarks:

1. **Compute the percentage of students in your class who have met the benchmark and compare it to your goal**

2. **Determine whether the difference is large enough so that a major change should be made in the reading program for the students "at risk."**

3. **Meet with your Leadership Team to determine what program changes are feasible.**

Section 12: Frequently Asked Questions

Inevitably, as CBM is introduced as an approach to monitoring reading growth teachers ask good questions about the approach. Since many of the questions are common across teachers, those most frequently asked questions are considered and an effort to answer those questions is provided.

About CBM

1. We already use the MCAs and another standardized achievement test to assess students. How are these measures different?

Standardized tests of achievement, like the MCAs, the Northwest Achievement Levels Tests, and the Iowa Tests of Basic Skills, are typically given once a year and provide an indication of student performance relative to peers at the state or national-level. Conversely, curriculum-based measures are an efficient means of monitoring student performance on an ongoing basis. With CBM, we are able to detect whether students are in fact, making progress toward an end goal and to monitor the effects of instructional modifications aimed at helping the student reach this goal.

2. How is CBM different from running records? Or informal reading inventories?

Running records and informal reading inventories (IRIs) focus on specific skills whereas curriculum based measures are indicators of overall reading proficiency. In addition, a large body of research has shown that one-minute samples of the number of words read correctly from reading passages are sensitive, reliable, and valid of measures of reading proficiency – there is little research to support the use of running records and IRIs. If teachers find them useful, running records and IRI's may be used in conjunction with weekly progress monitoring to help inform changes to students' instructional programs.

3. These measures are called curriculum-based but are they based on our curriculum? Does that matter?

Research has shown that it doesn't matter whether passages are based on a particular school's curriculum. What's important is whether the passages used for monitoring are constant (or at a similar level of difficulty) from one measurement period to the next. We would like to be able to detect whether students are growing in their overall reading proficiency.

About Oral Reading Measures

4. All of my students' oral reading scores go up on one passage and all go down on another passage. Do these passages have different levels of difficulty even though they are supposed to be at the same level?

There is no way to assure that all passages used are at the exact same level of difficulty. Passages (even taken from the same level) are going to vary. In addition to passage difficulty, student performance may vary from week-to-week for a number of reasons – lack of sleep, problems with friends, being hungry, etc. That's why it is important to look at the overall trend of the data (it's kind of like the stock market). Every data point that is collected adds stability to the measure of reading performance. This problem can be dealt with by measuring frequently (once a week) and taking the median of 3 passages at each measurement period.

5. If the passages have different levels of difficulty, what should we do? Are they still useful for measuring?

Even if the passages are somewhat different in level of difficulty, they can still be useful for measuring progress. It is important to stay consistent, such as within the same level (i.e., A, B, or C, for example) or grade level when monitoring students' progress over time. It is likely that passages in a given level will vary in difficulty, but if students are monitored frequently enough, this shouldn't make much of a difference.

6. Should I have my students practice reading passages out loud for one minute?

No. Reading out loud is NOT the intervention – it is an indicator of reading proficiency.

7. How do you pick the level to monitor students who are new to English?

If a student is new to English, start with a Level A passage. If a student scores less than 10 words a minute, monitor the student with the Onset Recognition measures that the Kindergarten is using. If the student reads 10 words or more words correctly, continue to monitor with the Level A passages.

8. Should I count mispronounced words wrong for ELL students? Even if the student mispronounces a word due to an accent?

9. Should I count mispronounced words wrong for students who speak with a different regional dialect?

Response to questions #8 and #9: If a student mispronounces a word, and this mispronunciation is due to an accent, or different regional dialect, the word should be scored correct. A distinction should be made between incorrectly pronounced words and words that are pronounced differently due to accent or dialect.

10. Some of my students' scores are going down instead of up. Does this mean that they not learning or that they are actually becoming worse?

There are different factors that might lead to a decrease or lack of progress in a student's performance. It is important to look at performance over time. If a student is not increasing, it is important to continue to monitor them frequently and modify instruction to accelerate his/her progress. (See question 7 also).

11. Some of my students are making progress but they are still not meeting their goal. Should I lower their goal?

No, instead of lowering the goal, we might ask: is there anything I can do differently, or is there a need for an instructional change? And remember, there will be individual differences across students. Students will not always grow at the same rate.

Section 13: Research Background

Over twenty years of research has established the *reliability*, *validity*, and *utility* of these measures for measuring and improving student performance in reading.

A recent chapter by Deno, Espin, and Fuchs (2002) concisely summarizes this research in the following areas: data utilization, goal-setting, instructional modifications, teacher planning and student achievement.

- **Data utilization**: CBM has been shown to enhance teacher planning and student learning by helping teachers set ambitious student goals, assisting teachers in determining when instructional adaptations are necessary to prompt better student growth, and providing ideas for potentially effective teaching adjustments.

- **Goal setting**: Research has demonstrated that when teachers set ambitious goals for their students, student growth is positively affected. For example, Fuchs, Fuchs, and Hamlett (1989a) examined the contribution of goal-raising guidelines to student performance. Teachers were assigned to three conditions: no CBM, CBM without a goal-raising rule, and CBM with a goal-raising rule. Teachers with a goal-raising rule were required to increase goals whenever a student's actual rate of growth was greater than the growth rate anticipated by the teacher. Students in the goal-raising condition had significantly higher achievement than students in the other conditions. For students in the two CBM conditions, the increase produced by goal raising increased the average student score more than 20 percentile points.
- **Instructional modifications**: In general, when teachers monitor student performance and change instructional programs when students are not making progress, students achieve at a higher rate. Fuchs, Fuchs, and Hamlett (1989b) explored the effects of instructional modifications within CBM among 29 special education teachers and 53 students with mild or moderate disabilities. Students whose teachers changed their instructional programs in response to CBM data achieved more than students who were not monitored with CBM procedures (an increase of more than 25 percentile points) and those who were being monitored with CBM materials without instructional modifications (more than 30 percentile points).

- **Teacher Planning and Student Achievement**: In addition to examining the contribution of each strategy by which CBM informs and strengthens instructional plans, research has examined CBM's overall contribution to teacher planning and student achievement in regular classrooms and in special education.

  With respect to <u>regular education</u>, the question is whether CBM can be used to adapt the setting to boost student performance and avoid special education referral. This process of adapting general education to preclude the need for a special education is known widely as prereferral assessment (e.g., Graden, Casey, & Christenson, l985). Although current special education practice often incorporates prereferral assessment (Ross, l995), the nature of modifications often is insubstantial, and the effects of those adaptations

frequently are evaluated unsystematically (Fuchs & Fuchs, 1992). With the addition of CBM, prereferral assessment can be formalized and systematized.

In this way, the Minneapolis Public Schools incorporated CBM prereferral assessment into its eligibility assessment process (Marston & Magnusson, l988). Over 6 weeks, interventions were implemented, and ongoing CBM data were collected to assess the extent to which students' academic needs could be addressed in the regular classroom when instructional adaptations were introduced. Only pupils whose performance did not improve as a function of those adaptations were identified for special education services. Marston and Magnusson reported that 25-45% of initially referred students were deemed eligible for special education after CBM prereferral assessment. This figure is dramatically lower than the estimate reported by Algozzine, Christenson, and Ysseldyke (l982), in which 90% of referred students were subsequently identified for special education using conventional assessment procedures.

In a similar way, Fuchs, Fuchs, Hamlett, Phillips, and Karns (l995) studied the viability of CBM prereferral assessment. Classroom teachers were assigned randomly to two treatments. In both treatments, teachers implemented ongoing CBM with all students in their classes beginning in September. In addition, to facilitate the link between CBM and instruction, teachers in both conditions incorporated a structured form of peer-assisted learning (e.g., Fuchs, Fuchs, Mathes, & Simmons, l997; Fuchs, Fuchs, Phillips, Hamlett, & Karns, 1997). This combination of CBM and peer-assisted learning strategies represented the baseline treatment in the Fuchs et al. (l995) study. At least 10-33% of students fail to demonstrate persuasive progress with otherwise demonstrably effective programs. For that reason, a need exists to identify and treat students who manifest unacceptable performance and growth. So, a second treatment in the Fuchs et al. (l995) study focused on individual adaptations conducted in regular classrooms. Beginning in November, the bimonthly CBM class reports identified up to two students per class whose CBM progress was inadequate (i.e., low level combined with low slope, relative to classmates). For these students, teachers (a) formulated an adaptation before the next 2-week report; (b) implemented that adaptation at least four times in the upcoming 2 weeks; and (c) when CBM identified the same student multiple times over reports, modified previous adaptations to enhance progress.

Results demonstrated that when classroom teachers are specifically prompted with CBM and supported to engage in instructional adaptation, they do so with respectable fidelity. Across three to six 2-week adaptation cycles, teachers ignored requests for adaptations only infrequently; they often implemented multiple strategies concurrently to address the problems of target students; and some teachers manifested modified student programs repeatedly in a variety of ways in an attempt to boost progress. Moreover, teacher reliance on individual adaptations appeared to prompt changes in their thinking about differentiating instructional plans. Compared to teachers in the baseline treatment, those in the adaptations treatment reported (a) more modifications in their goals and strategies for poorly progressing students; (b) a greater variety of skills taught; (c) selective reteaching of lessons more frequently; and (d) more frequent deviation from the teacher's manual for selected students.

Findings were not, however, uniformly positive. Despite many focused, data-based attempts to enhance learning, some children proved unresponsive to regular classroom adaptations. Two brief cases illustrate students' differential responsiveness. Over a 12-week period, a fourth-grade teacher implemented a rich set of adaptations, relying on basic facts drill, motivational work charts and contracts, and manipulatives. The target student, who exhibited a CBM slope of .21 digits per week when identified for adaptation, responded well to these modifications to the regular classroom and completed the school year with a slope of .63 digits per week -- the average slope for the class. This success contrasts with the experience of a third-grade teacher who also implemented a large number and rich set of adaptations including drilling basic facts, slicing back to second-grade material, implementing a motivational work chart, and using money to work on conceptual underpinnings. Despite this teacher's similar level of effort to modify regular classroom instruction, her target student demonstrated little improvement in growth rate: He ended the year with a relatively low slope of .28 digits per week, which was similar to his slope at the time he was identified for adaptation and was considerably lower than his classmates' average slope of .98 digits per week.

Three of the 10 teachers effected substantial improvement for at risk students. This suggests that, with the assistance of rich assessment information and consultative support to formulate feasible adaptations, classroom teachers may be able to address the problems of some portion (in this case, 30%) of students who initially demonstrate significant learning discrepancies from classroom peers. Nevertheless, this database simultaneously indicates that some students will remain unresponsive to an adapted general education environment.

This unresponsiveness creates the need for additional resources -- specifically, the individualized instruction, the small-size instructional groups, and the more highly trained teachers available through compensatory programs -- to address the learning problems of a small portion of learners. In fact, strong evidence supports CBM's utility in helping special educators plan more effective programs. Studies (e.g., Fuchs, Deno, & Mirkin, l984; Fuchs, Fuchs, Hamlett, & Allinder, l991a; Fuchs, Fuchs, Hamlett, & Ferguson, l992; Jones & Krouse, l988; Stecker, l994; Wesson, et al., l984, 1986; Wesson, l991) provide corroborating evidence of dramatic effects on student outcomes in reading, spelling, and math when special educators rely on CBM to inform instructional planning. To illustrate this approach, we briefly describe one study in reading.

Fuchs, Deno, & Mirkin (l984) conducted a study in the New York City Public Schools. Teachers participated for 18 weeks in a contrast group or a CBM treatment group, where teachers measured students' reading performance at least twice weekly, scored and graphed those performances, and used prescriptive CBM decision rules for planning the students' reading programs. Children whose teachers employed CBM to develop reading programs achieved better than students whose teachers used conventional monitoring methods on the Passage Reading Test and on the decoding and comprehension subtests of the Stanford Diagnostic Reading Test, with respective effect sizes of 1.18, .94, and .99. This suggests that, despite the focus on passage reading fluency in CBM, teachers

planned better reading programs comprehensively to include a multiple focus on fluency, decoding, and comprehension.

Section 14: Web Sites

http://www.interventioncentral.org/pdfdocs/cbaManual.pdf
This site has a training manual and information for teachers developed by Jim Wright of the Syracuse (NY) City Schools.

www.education.umn.edu/research/CBM.htm
This provides a brief background and summary of CBM research at the University of Minnesota.

http://sss.usf.edu/cbm/SiteMap.htm
This site is maintained by the University of South Florida and provides resources and information regarding the use of CBM and DIBELS (Dynamic Indicators of Basic Early Literacy Skills).

http://dibels.uoregon.edu/
This site contains information regarding measuring student progress in the area of early literacy

Section 15: References

To create this module, we have drawn material from a number of sources, including:

- Children's Education Services, Inc. (1987). Standard Reading Passages: Measures for Screening and Progress Monitoring in Reading. Minneapolis, MN.

- Deno, S. (in press). Curriculum-Based Measurement: A uniquely special education Development. Exceptional Children.

- Deno, S., Espin, C., & Fuchs, L. (2002). Evaluation strategies for preventing and remediating basic skill deficits. In M.R. Shinn, H.M. Walker, & G. Stoner (Eds.), Interventions for achievement and behavior problems II: Preventive and remedial approaches. Bethesda, MD: National Association of School Psychologists.

- Deno, S., Mirkin, P., Fuchs, L., Wesson, C., Tindal, G., Marston, D., & Kuehnle, K. (2002). Procedures to develop and monitor students' academic progress. Revision in progress, University of Minnesota.

Other references that we recommend:

- Deno, S.L. (1985). Curriculum-based measurement: The emerging alternative. Exceptional Children, 52, 217-232.

- Deno, S. L. (1989). Curriculum-based measurement and special education services: A fundamental and direct relationship. In M.R. Shinn (Ed.), Curriculum-based measurement: Assessing special children (pp. 1-17). New York: Guilford Press.

- Marston, D., & Magnusson, D. (1988). Curriculum-based measurement: District Level Implementation. In J. Graden, J. Zins, & M. Curtis (Eds.)., Alternative educational delivery systems: Enhancing instructional options for all students. Washington, DC: National Association of School Psychologists.

PROGRESS MONITORING

STUDY GROUP ACTIVITIES

DEVELOPED BY STANLEY DENO, ERICA LEMBKE, AND AMY RESCHLY ANDERSON

Following is a suggested sequence of study group activities for individual classroom levels, grade level teams, and at a school-wide level. The leadership team in your school will work with you to make decisions about the level at which to proceed and how you will progress through the activities. Your study group should develop a timeline for completing suggested activities, as well as any additional activities that you feel might be beneficial. The progress monitoring procedures are the same whether done on an individual, grade, or school-wide level. When the progress monitoring data are going to be aggregated across classrooms, then the decision regarding what to measure, how to measure (i.e., materials to be used), and when measurements should occur will need to be made collaboratively, with all participants involved.

GOALS

1) **DEVELOP A PLAN FOR PROGRESS MONITORING**

2) **COMPLETE SCREENING**

3) **SET GOALS FOR INDIVIDUAL STUDENTS, ESTABLISH CLASSWIDE BENCHMARKS, AND BEGIN PROGRESS MONITORING**

4) **CHOOSE A DATA UTILIZATION RULE FOR INDIVIDUAL STUDENTS, ESTABLISH BENCHMARK DECISION RULES, AND DEVELOP A PLAN AND SCHEDULE THE WINTER SCREENING**

5) **COMPLETE WINTER SCREENING AND FOCUS ON CLASSROOM BENCHMARKS AND MAKING DATA-BASED DECISIONS ABOUT INDIVIDUAL STUDENTS**

6) **COMPLETE SPRING SCREENING AND FOCUS ON CLASSROOM BENCHMARKS AND MAKING DATA-BASED DECISIONS ABOUT INDIVIDUAL STUDENTS**

***THE PHRASES PROGRESS MONITORING AND CBM ARE USED SYNONYMOUSLY THROUGHOUT THESE ACTIVITIES AND SHOULD BE INTERPRETED AS THE SET OF PROCEUDRES UTILIZED TO MONITOR STUDENT GROWTH IN READING.*

Time Line

July/August

- Decide on the level at which you will proceed (classroom, grade, or school-wide)
- Prepare materials
- Decide on a monitoring schedule
- Practice probe administration and scoring
- Develop a data-management system
- Develop background knowledge

September

- Conduct a **Fall** screening
- Identify students at-risk

- Develop background knowledge

October

- Set classroom goals and establish benchmarks
- Prepare graphs for students that will be monitored
- Set short term objectives and long range goals for students that will be monitored
- Develop background knowledge

November

- Data utilization and decision making
- Implementing interventions
- Develop a plan and schedule the **Winter** screening
- Develop background knowledge

December/January

- Conduct a **Winter** screening
- Examine individual student data relative to classroom benchmarks
- Develop background knowledge

March/April

- Develop a plan and schedule the **Spring** screening
- Conduct a **Spring** screening
- Examine individual student data relative to classroom benchmarks

Consider the following activities based on the progress monitoring level that you've chosen for your school.

July-August

GOAL—DEVELOP A PLAN FOR PROGRESS MONITORING

Progress Monitoring is an approach to measuring the growth of student proficiency in the *core educational skills* that contribute to success in the curriculum. For reading, reading aloud fluently and accurately from text (*Oral Reading)* is measured. The purpose of progress monitoring is to provide educators with an efficient ways to *evaluate* the *effectiveness* of a student's instructional program. Some key characteristics of progress monitoring are that performance is sampled frequently, and progress is graphed. Progress monitoring involves collecting direct, frequent measures of student performance. The data are used to establish individualized or class wide instructional goals and benchmarks, and to make instructional decisions. Twenty years of research establishes that the progress monitoring measures reliably and validly describe student growth and that when the data are used to make instructional decisions, their performance greatly improves.

Individual Teacher Level

Activity 1—Develop Materials

Decide on materials to use for progress monitoring. Develop probes or get the prepared materials from the website. Refer to Section 6 of the Content Module for more details about selecting materials.

Activity 2—Establish a Monitoring Schedule

Make decisions about how often to monitor students and whom to monitor. A suggested schedule would be to screen class-wide three times a year (Fall, Winter, and Spring) and monitor the bottom 40% of your class once per week. Refer to Section 7 of the Content Module for more information about monitoring schedules.

Activity 3—Probe Administration and Scoring

Review and practice progress monitoring procedures. Please see Section 3 of the Content Module for basic directions for reading. Please see Section 4 of the Content Module for scoring guidelines.

Activity 4—Establish a Management System

Decide on how you will manage your individual student data.

Activity 5—Develop Background Knowledge

Read the following selection and discuss in your study group. Use suggested discussion questions from Appendix 1.

Results by Mike Schmoker, pp. 1-21.

GRADE LEVEL

Activity 1—Develop Materials

Decide on materials to use for progress monitoring. Develop probes or get the prepared materials from the website. Refer to Section 6 of the Content Module for more details about selecting materials.

Activity 2—Establish a Monitoring Schedule

Make decisions about how often to monitor students and whom to monitor. A suggested schedule would be to screen school-wide three times a year (Fall, Winter, and Spring) and monitor the bottom 40% of each grade once per week. Refer to Section 7 of the Content Module for more information about monitoring schedules.

Activity 3—Probe Administration and Scoring

Review and practice progress monitoring procedures. Please see Section 3 of the Content Module for basic directions for reading. Please see Section 4 for scoring guidelines.

Activity 4—Establish a Management System

Decide who will manage the database of student progress data. This person will enter student's median scores for Fall, Winter, and Spring and determine who should be monitored.

Activity 5—Develop Background Knowledge

Distribute one copy of the following selection to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Results by Mike Schmoker, pp. 1-21.

SCHOOL-WIDE LEVEL

Activity 1—Develop Materials

Decide on materials to use for progress monitoring. Develop probes or get the prepared materials from the website. Refer to Section 6 of the Content Module for more details about selecting materials.

Activity 2—Establish a Monitoring Schedule

Make decisions about how often to monitor students and who to monitor. A suggested schedule would be to screen school-wide three times a year (Fall, Winter, and Spring) and monitor the bottom 40% of grade once per week. Refer

to Section 7 of the Content Module for more information about monitoring schedules.

Activity 3—Probe Administration and Scoring

Review and practice progress monitoring procedures. Please see Section 3 of the Content Module for basic directions for reading. Please see Section 4 of the Content Module for scoring guidelines.

Activity 4—Establish a Management System

Decide who will manage the database of student progress data. This person will enter student's median scores for Fall, Winter, and Spring and determine who should be monitored.

Activity 5—Develop Background Knowledge

Distribute one copy of the following selection to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Results by Mike Schmoker, pp. 1-21.

September

Goal—Complete Screening

Screening is an assessment procedure used with all students to identify the level at which students are currently achieving. Screening will help you identify students at-risk of academic failure. Using screening to identify students at-risk will be efficient for you, as you won't have to monitor all students in your classroom, but rather the students that are the lowest achieving in each grade. Prevention is also important, and when you screen all students three to four times a year, you identify students who are at-risk that might not have been identified otherwise. This first activity is to develop a plan for screening all students using oral reading that you were introduced to in the summer session. You can find out more about screening by referring to Sections 2 and 5 in the Content Module.

INDIVIDUAL TEACHER LEVEL

Activity 1—Fall Screening

Screen your class using the CBM oral reading procedures (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening can be implemented 3 times a year (Fall, Winter, and Spring). For screening purposes, each student will read 3 passages aloud for 1 minute each. The student's median score for number of words read correctly will be entered into the database. The same 3 passages will be used again in Winter and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Identify Students at Risk

Use screening data to determine the bottom 40% of students in your class. See Section 5 of the Content Module for an example of how to determine the bottom 40% of your class

Activity 3—Develop Background Knowledge

Read the following article and discuss in your study group. Use suggested discussion questions from Appendix 1.

Fuchs, L.S., Fuchs, D., & Hosp, M.K. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5(3),* 239-256.

GRADE LEVEL

Activity 1—Fall Screening

Conduct a grade level Fall screening (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening can be implemented 3 times a year (Fall, Winter, and Spring). For screening purposes,

each student will read 3 passages aloud for 1 minute each. The student's median score for number of words read correctly will be entered into the database. The same 3 passages will be used again in Winter and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Identify Students at Risk

Use screening data to determine the bottom 40% in each grade. See Section 5 of the Content Module for an example of how to determine the bottom 40% of each grade.

Activity 3—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Fuchs, L.S., Fuchs, D., & Hosp, M.K. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5(3),* 239-256.

SCHOOL-WIDE LEVEL

Activity 1—Fall Screening

Conduct a grade level Fall screening (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening can be implemented 3 times a year (Fall, Winter, and Spring). For screening purposes, each student will read 3 passages aloud for 1 minute each. The student's median score for number of words read correctly will be entered into the database. The same 3 passages will be used again in Winter and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Identify Students at Risk

Use screening data to determine the bottom 40% in each grade. See Section 5 of the Content Module for an example of how to determine the bottom 40% of each grade.

Activity 3—Identify Support Personnel

Choose one resource person from the study group to help with each grade level.

Activity 4—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Fuchs, L.S., Fuchs, D., & Hosp, M.K. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5(3),* 239-256.

October

GOAL—SET GOALS FOR INDIVIDUAL STUDENTS, ESTABLISH CLASSWIDE BENCHMARKS, AND BEGIN PROGRESS MONITORING

Setting reading goals for students and establishing classwide benchmarks as part of CBM is effective, because teachers clarify and define expectations and, eventually, determine intervention effectiveness. An empirical basis for setting goals has been established, and teaching is more effective when instructional programs are adjusted based on students' needs, goal-setting enhances intervention effectiveness, and the result is improved educational outcomes for students. The table below describes how CBM procedures differ from commonly used assessment practices when setting goals and utilizing data for decision making.

INDIVIDUAL TEACHER LEVEL

Activity 1—Set goals for students and establish classwide benchmarks

Examine results from your class-wide screening. Set goals for individual students and establish classwide benchmarks (see Section 8 of the Content Module).

Activity 2—Prepare Graphs for Students that will be Monitored

Use the information in Section 10 of the Content Module, Graphing and Charting, to set up graphs for the students that you will be progress monitoring.

Activity 3—Set Short Term Objectives and Long Range Goals for students that will be monitored

Determine growth rates and long range goals for the students that will be monitored. Use information in Section 8 of the Content Module. Determine the length of the monitoring period (number of weeks until the next screening.)

Activity 4—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Davidson, M. & Myhre, O. (2000). Measuring reading at grade level. *Educational Leadership, February,* 25-28.

GRADE LEVEL

Activity 1— Set goals for individual students and establish classwide benchmarks

Distribute results of grade level data collections to individual teachers. Set goals for individual students and establish classwide benchmarks (see Section 8 of the Content Module).

Activity 2— Prepare graphs for students that will be monitored

Teachers should use the information in Section 10 of the Content Module, Graphing and Charting, to set up graphs for the students they will be progress monitoring.

Activity 3— Set short term objectives and long range goals for students that will be monitored

Determine growth rates and long range goals for the students that will be monitored. Use information in Section 8 of the Content Module. Determine the length of the monitoring period (number of weeks until the next screening.)

Activity 4—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Davidson, M. & Myhre, O. (2000). Measuring reading at grade level. *Educational Leadership, February,* 25-28.

SCHOOL-WIDE LEVEL

Activity 1— Set goals for individual students and establish classwide benchmarks

Distribute results of school-wide data collections to individual teachers. Set goals for individual students and establish classwide benchmarks (see Section 8 of the Content Module).

Activity 2— Prepare graphs for students that will be monitored

Teachers should use the information in Section 10 of the Content Module, Graphing and Charting, to set up graphs for the students they will be progress monitoring.

Activity 3— Set short term objectives and long range goals for students that will be monitored

Determine growth rates and long range goals for the students that will be monitored. Use information in Section 8 of the Content Module. Determine the length of the monitoring period (number of weeks until the next screening.)

Activity 4—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Davidson, M. & Myhre, O. (2000). Measuring reading at grade level. *Educational Leadership, February,* 25-28.

November

GOAL—CHOOSE A DATA UTILIZATION RULE FOR INDIVIDUAL STUDENTS, ESTABLISH BENCHMARK DECISION RULES, AND DEVELOP A PLAN AND SCHEDULE THE WINTER SCREENING

Decision Rules

The research on effectively using CBM within a formative evaluation framework has established that teacher responsiveness to the data is a key factor in determining success. For example, "goal ambitiousness seems to positively effect student achievement (Fuchs, Fuchs, & Deno, 1985). Teachers and students who set their goals higher and continue to increase those goals progress at a more rapid rate than do peers who select lower performance goals and do not change them. Further, a meta-analysis of research on the effects of using student performance data in instruction has revealed that teachers who follow specific rules for how to be responsive to the data are more effective than teachers who simply collect and graph the data (Fuchs & Fuchs, 1986). As a result of these research findings, the developers of CBM typically have recommended a set "decision-rules" that increase the likelihood that teachers and students will be responsive to the data that are being graphed. The most common form of these decision-rules can be found in Section 11 of the Content Module.

INDIVIDUAL TEACHER LEVEL

Activity 1—Discuss data utilization and decision making, using graphs of student data

Bring in some graphs of your student data on overheads. Use information in Appendix 2 as you discuss how you can utilize the student data you are collecting. Make decisions about when you will implement interventions with the students who are not making progress (see Section 11 of the Content Module for more information about instructional decision making).

Activity 2—Discuss possible interventions that might be implemented with students who are not making progress.

Generate research-based interventions, drawing upon other Content Modules from the REA.

Activity 3—Develop a plan for and schedule the Winter screening.

Activity 4—Develop Background Knowledge

Distribute one copy of the following chapter to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Worthy, J. & Broaddus, K. (2001/2002). Fluency beyond the primary grades: From group performance to silent, independent reading. *The Reading Teacher, 55(4)*, 334-343.

GRADE LEVEL

Activity 1—Discuss data utilization and decision making, using graphs of student data

Have teachers in each grade bring in some graphs of their student data on overheads. Use information in Appendix 2 to discuss how teachers can utilize the student data they are collecting. Make decisions about when they will implement interventions with the students who are not making progress (see Section 11 of the Content Module for more information about instructional decision making).

Activity 2—Discuss possible interventions that might be implemented with students who are not making progress.

Generate research-based interventions, drawing upon other Content Modules from the REA.

Activity 3—Develop a plan for and schedule the Winter screening.

Activity 4—Develop Background Knowledge

Distribute one copy of the following chapter to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Worthy, J. & Broaddus, K. (2001/2002). Fluency beyond the primary grades: From group performance to silent, independent reading. *The Reading Teacher, 55(4),* 334-343.

SCHOOL-WIDE LEVEL

Activity 1—Discuss data utilization and decision making, using graphs of student data

Have teachers in each grade bring in some graphs of their student data on overheads. Use information in Appendix 2 to discuss how teachers can utilize the student data they are collecting. Make decisions about when they will implement interventions with the students who are not making progress (see Section 11 of the Content Module for more information about instructional decision making).

Activity 2—Discuss possible interventions that might be implemented with students who are not making progress.

Generate research-based interventions, drawing upon other Content Modules from the REA.

Activity 3—Develop a plan for and schedule the Winter screening.

Activity 4—Develop Background Knowledge

Distribute one copy of the following chapter to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Worthy, J. & Broaddus, K. (2001/2002). Fluency beyond the primary grades: From group performance to silent, independent reading. *The Reading Teacher, 55(4)*, 334-343.

December / January

GOAL—COMPLETE WINTER SCREENING AND FOCUS ON CLASSROOM BENCHMARKS AND MAKING DATA-BASED DECISIONS ABOUT INDIVIDUAL STUDENTS

INDIVIDUAL TEACHER LEVEL

Activity 1—Winter screening.

Screen your class using the CBM oral reading procedures (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For Winter screening, each student reads the 3 passages aloud again for 1 minute each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

Activity 3—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Deno, S.L., Espin, C.A., & Fuchs, L.S. (2001). Evaluation strategies for preventing and remediating basic skill deficits. *Interventions*,

GRADE LEVEL

Activity 1—Winter Screening

Conduct a grade level Winter screening (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For Winter screening, each student reads the 3 passages aloud again for 1 minute each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

Activity 3—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Deno, S.L., Espin, C.A., & Fuchs, L.S. (2001). Evaluation strategies for preventing and remediating basic skill deficits. *Interventions,*

SCHOOL-WIDE LEVEL

Activity 1—Winter Screening

Conduct a grade level Winter screening (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For Winter screening, each student reads the 3 passages aloud again for 1 minute each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

Activity 3—Develop Background Knowledge

Distribute one copy of the following article to each member of your grade level team (including special educators) and have teachers on your team read and discuss. Use suggested discussion questions from Appendix 1.

Deno, S.L., Espin, C.A., & Fuchs, L.S. (2001). Evaluation strategies for preventing and remediating basic skill deficits. *Interventions,*

March / April

GOAL—COMPLETE SPRING SCREENING AND FOCUS ON CLASSROOM BENCHMARKS AND MAKING DATA-BASED DECISIONS ABOUT INDIVIDUAL STUDENTS

INDIVIDUAL TEACHER LEVEL

Activity 1—Spring screening.

Complete your final screening using the CBM oral reading procedures (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For screening purposes, students read 3 passages aloud for 1 minute each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

GRADE LEVEL

Activity 1—Spring Screening

Complete your final screening using the CBM oral reading procedures (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For screening purposes, students read 3 passages aloud for 1 minute each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

SCHOOL-WIDE LEVEL

Activity 1—Spring Screening

Complete your final screening using the CBM oral reading procedures (see Section 2 of the Content Module for an overview of the screening and progress monitoring process). Screening is implemented 3 times a year (Fall, Winter, and Spring). For screening purposes, students read 3 passages aloud for 1 minute

each. A student's median score for number of words read correctly will be entered into the database. The same 3 passages are used for Fall, Winter, and Spring. Please see Section 5 of the Content Module for an example of how to determine the median baseline scores (both correct and incorrect).

Activity 2—Examine individual student data relative to classroom benchmarks

Identify students who did not contribute to meeting the classroom goal and decide how to modify their progress.

Appendix 1

Discussion questions

***Results*, pp. 1-21, Introduction and Chapter 1**

1) Are there initiatives like progress monitoring that have been introduced in our school that have been successful or unsuccessful? What has made them this way?

2) What practices are in place in our school or district in which results are examined to determine program effectiveness? How will progress monitoring integrate with those practices?

3) How is teacher isolation detrimental to a building? Will this have an influence on implementation of a progress monitoring system in our building?

4) How can we improve teamwork and collegiality in our building?

5) How can we capitalize on teacher expertise in our building as we implement the progress monitoring system?

6) What will effective teamwork in designing a progress monitoring system look like in our school?

7) How can administrative collaboration be improved in our school?

Fuchs, L.S., Fuchs, D., & Hosp, M.K. (2001). Oral reading fluency as an indicator of reading competence: A theoretical, empirical, and historical analysis. *Scientific Studies of Reading, 5(3)*, 239-256.

1) How did our perceptions about oral reading fluency change as a result of this article?

2) How would we defend oral reading fluency as an indicator of reading competence after reading this article?

3) Discuss the articles' empirical findings related to the relationship between oral reading fluency and comprehension.

4) What were the findings when oral reading was compared with single word recognition and silent reading? What impact, if any, might these results have for our school?

5) Why do you think oral reading fluency has largely been ignored as a method of monitoring reading competence?

Davidson, M. & Myhre, O. (2000). Measuring reading at grade level. *Educational Leadership, February,* 25-28.

1) How does the Victory 1000 program described in this article compare to the progress monitoring system that we will be implementing?

2) Are there components described in this article that we should consider when implementing our progress monitoring system?

3) What benefits can we foresee will result from implementation of a school wide progress monitoring system (discuss in terms of student, teacher, parent, administrator, and community benefits)?

Worthy, J. & Broaddus, K. (2001/2002). Fluency beyond the primary grades: From group performance to silent, independent reading. *The Reading Teacher, 55(4),* 334-343.

1) Why is fluency important to our students?

2) What are some traditional methods to increase fluency that may not be as effective and how can we improve upon these methods?

3) How can modeled reading and instruction on explicit skills be beneficial for our students?

4) Many instructional strategies are presented in this article. Which strategies could we recommend to teachers that are in search of instructional interventions for their struggling readers? Are there strategies that we should not recommend?

5) How does silent reading fit into the reading instruction at our school? Are students able to capitalize on the time that is provided for silent reading (is it maximally beneficial to them)?

6) How can we help students increase their reading fluency in content area subjects?

Deno, S.L., Espin, C.A., & Fuchs, L.S. (2001). Evaluation strategies for preventing and remediating basic skill deficits. *Interventions,*

1) How do summative and formative evaluation differ and how teachers utilize these two methods with their students?

2) How does formative evaluation increase instructional effectiveness?

3) How do traditional models of student assessment differ from progress monitoring? How can progress monitoring be beneficial to our teachers as they conduct student assessment?

4) How do progress monitoring and mastery monitoring differ? What are general outcome measures and how can they be utilized with our students?

5) What are the beneficial results teachers have incurred as a result of implementing Curriculum-based Measurement (based on the literature)?

6) Based on the case study in this chapter, how can CBM be used for instructional decision-making?

7) Briefly summarize how evaluation can be used to enhance the effectiveness of interventions.

Additional articles to use in discussion:

Good, R.H., Simmons, D.C., & Kame'enui, E.J. (2001). The importance and decision-maing utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. ***Scientific Studies of Reading, 5(3),*** **257-288.**

Appendix 2

Suggested questions for discussion of graphed student data:

1) What was the student's median baseline score (for number of words read in one minute)?

2) What short term objective did you decide on for the student (number of words gained per week)? Why did you decide on this STO?

3) What is the students long range goal?

4) How often are you collecting data?

5) What does the data indicate so far? Is the student meeting his/her goal? Not meeting the goal? Exceeding the goal?

6) Does it appear the instruction that you are using for this student is working? Why or why not?

7) Make instructional decisions using the decision-making rule that you've decided on (see Section 11 of the Content Module for more information).