



## **TECHNICAL REPORT #34:**

Teacher Use Study: Surveys from Urban District

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### Purpose of Primary Study

#### Teacher Use Study (2007-2008): Reading Aloud vs. Maze Selection

(Taken from Tech Report #31)

This research focused on factors that might influence teachers' use of progress monitoring data in their design of instructional programs. Specifically, the study investigated the effects of using reading aloud vs. maze selection progress measures on teachers' instruction and student learning. We hypothesized that the type of measure would affect the focus of teachers' instruction, with maze selection measures leading to a greater focus on reading comprehension and reading aloud measures leading to a greater focus on phonics and fluency. We further hypothesized that these differences in instruction would affect student performance, with students monitored with maze selection performing better in reading comprehension, and students monitored with reading aloud performing better in phonics and fluency. The research question addressed in the study was, "What are the effects of using different types of progress measures (reading aloud vs. maze selection) on teacher instruction and student learning?"

### Purpose of Survey Component

Part of the parent study focused on examining how two different measures, reading aloud and maze selection, influenced teacher instruction. To investigate the effects of the measures, the research team originally asked teachers to fill out two forms, an instructional plan and a schedule for posting information on Moodle. The instructional plan was meant to provide information on the initial programming for each student participant. The scheduling form had a column in which teachers were asked write down instructional changes made to individual plans and the date those plans were initiated. However, participant use of these forms was minimal. Nine returned the instructional forms, and despite reminders, none returned the scheduling form. Surveys were

generated as an alternate measure to capture effects reading aloud and maze selection measures had on teacher instruction.

## Method

### *Setting and Participants*

The surveys were completed by 18 special education teachers from a large urban district. Each teacher filled out surveys about the reading progress of two, four, or six students from their caseload. Half of each teacher's students were monitored with reading aloud measures and the other half with maze selection measures. In total, surveys were completed on 64 students who received individualized or small group instruction in reading. See Tech Report #31 for a detailed description of the setting, all participants (teacher and student), and selection procedures.

### *Independent Variables*

The independent variable in the study was the type of measure used to monitor student performance in reading, either reading aloud or maze selection. Each teacher monitored an equal number of students (one, two, or three) with each measure. Within a teacher's class, participating students were matched on reading level and assigned randomly to be monitored with either the reading aloud or the maze measure. Thus, this study used a within teacher experimental design.

### *Surveys*

Two surveys were generated to capture the effects different progress monitoring measures had on teacher instruction, a general survey and a student survey. The surveys were created in a three-step process. First, the researchers and a representative from the school district identified specific topics to be surveyed. Next, two research assistants drafted a prototype. Third, the initial team met two additional times to revise the prototype. Both surveys were administered at the end of the study.

*Student survey.* The student survey was developed by the researchers specifically to gather information about how teachers used progress monitoring data to individualize instruction. The student survey contained four items that asked teachers to rate how progress monitoring data collected from a student influenced them to make changes in that student's instructional programming and one item that asked them to list what kind of instructional changes they would recommend for the student. The scale for the first four questions ranged from 1 (not at all) to 4 (a lot). Teachers filled out one student survey for each student participant assigned to the reading aloud and the maze selection conditions. See Appendix A for the complete survey.

*General survey.* The purpose of the general survey was to obtain feedback on how the logistics of progress monitoring affected teacher instruction, as well as to gather teachers' opinions about the usefulness of the two CBM measures. We asked teachers to rate the ease of administering weekly probes, using a district-provided website to graph data, and using an online website for peer collaboration. In addition, teachers were asked to rate their frequency of use and the extent to which varied forms of progress monitoring were beneficial for different groups of students. Each teacher filled out one general survey. See Appendix B for the complete survey.

### *Data Analysis*

A within-teacher design was used, in which each teacher's participating students were matched on reading level and assigned randomly to progress monitoring using either reading aloud or maze selection measures. **Describe data analysis.**

## Results

In this study, we used surveys to collect evidence of A within-teacher design was used, in which each teacher's participating students were matched on reading level and assigned randomly to progress monitoring with or without diagnostic feedback (SARF or non-SARF). The effects reading aloud and maze selection measures have on teacher instruction. First, we discuss the differential effects as evidenced in the student surveys, and then, as evidenced in the general survey. Data from the student surveys were analyzed using *t*-tests to compare teacher responses for students monitored with reading aloud or maze selection measures. The tables below present item-by-item means and *SD*s for the whole group and by condition, as well as the corresponding *t*-value.

### *Student Surveys*

<i>Item 1.</i> To what extent has weekly progress monitoring helped you learn about _____'s reading growth in the following areas	<i>Condition</i>	<i>Overall Mean</i>	<i>Overall SD</i>	<i>Mean</i>	<i>SD</i>	<i>t-value</i>
General Reading Skills	Maze	3.25	.88	3.06	.998	-1.71
	Reading Aloud			3.44	.716	
Phonemic Awareness: Sounds in spoken words	Maze	2.95	1.03	2.59	1.132	-2.96
	Reading Aloud			3.31	.780	
Phonics: Sound/letter relationships and decoding	Maze	2.98	1.04	2.61	1.145	-3.01**
	Reading Aloud			3.37	.765	
Fluency: reading quickly, correctly, and with expression	Maze	3.17	.93	2.84	1.051	-2.98**
	Reading Aloud			3.50	.672	
Vocabulary: Word meaning	Maze	2.97	1.01	3.06	1.045	0.74**
	Reading Aloud			2.88	.976	
Comprehension: Understanding text	Maze	2.97	1.04	3.13	1.008	1.21

	Reading Aloud			2.81	1.061	
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*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item2.</i> To what extent did _____'s <b>progress monitoring data</b> in reading influence changes in the following?	<i>Condition</i>	<i>Overall Mean</i>	<i>Overall SD</i>	<i>Mean</i>	<i>SD</i>	<i>t-value</i>
Total reading time	Maze	2.31	1.08	2.22	1.070	-.69
	Reading Aloud			2.41	1.103	
Type of instructional activities	Maze	2.80	.95	2.75	.916	-.39
	Reading Aloud			2.84	.987	
Distribution of time allocated to instructional activities	Maze	2.56	1.13	2.47	1.167	-.61
	Reading Aloud			2.65	1.112	
Materials used	Maze	2.72	1.03	2.63	1.040	-.72
	Reading Aloud			2.81	1.030	
Student grouping	Maze	2.62	1.05	2.66	1.035	.28
	Reading Aloud			2.58	1.089	
Motivation strategies	Maze	2.67	1.04	2.53	1.042	-1.00
	Reading Aloud			2.80	1.031	
IEP goals/objectives	Maze	2.35	1.18	2.20	1.215	-.99
	Reading Aloud			2.50	1.137	

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item 3.</i> After reflecting on _____'s	<i>Condition</i>	<i>Overall</i>	<i>Overall</i>	<i>Mean</i>	<i>SD</i>	<i>t-value</i>
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<b>progress monitoring data</b> , if you were given the necessary resources and freedom (i.e., no time constraints, no specific ratio of teacher to students), to what extent would you make changes in the elements of _____'s instructional program listed below.		<i>Mean</i>	<i>SD</i>			
Total reading time	Maze	2.84	1.07	2.78	1.099	-.463
	Reading Aloud			2.91	1.058	
Type of instructional activities	Maze	3.30	.83	3.34	.787	.449
	Reading Aloud			3.25	.880	
Distribution of time allocated to instructional activities	Maze	3.08	.88	3.06	.878	-.141
	Reading Aloud			3.09	.893	
Materials used	Maze	3.34	.80	3.31	.780	-.310
	Reading Aloud			3.38	.833	
Student grouping	Maze	2.90	1.10	2.81	1.138	-.693
	Reading Aloud			3.00	1.078	
Motivation strategies	Maze	2.87	1.02	2.72	1.085	-1.220
	Reading Aloud			3.03	.948	
IEP goals/objectives	Maze	2.17	1.18	2.00	1.174	-1.095
	Reading Aloud			2.33	1.184	
Federal setting	Maze	1.69	1.11	1.50	1.000	-1.262
	Reading Aloud			1.87	1.196	

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item 4.</i> To what extent did the following influence your judgments about _____'s improvement in reading?	<i>Condition</i>	<i>Overall Mean</i>	<i>Overall SD</i>	<i>Mean</i>	<i>SD</i>	<i>t-value</i>
Comparing this week's score to last week's score	Maze	2.97	.92	2.84	.920	-1.082
	Reading Aloud			3.09	.928	
Comparing performance level to goal	Maze	3.15	.89	3.00	.947	-1.278
	Reading Aloud			3.29	.824	
Examining growth (slope of the data) across weeks	Maze	3.05	.84	2.94	.878	-1.038
	Reading Aloud			3.16	.808	
Listening as student reads aloud	Maze	3.20	.98	2.94	1.076	-2.239
	Reading Aloud			3.47	.803	
Watching as student reads silently	Maze	2.31	1.08	2.28	1.023	-.229
	Reading Aloud			2.34	1.153	
Noting the number and type of errors made	Maze	3.19	.91	3.13	.907	-.549
	Reading Aloud			3.25	.916	

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

*General Survey*

<i>Item1.</i> How easy/difficult was it to use the <b>read aloud</b> measure for progress monitoring? Rate each of the components below:	<i>Mean</i>	<i>SD</i>
Administering read aloud measures	1.06	.236
Scoring read aloud measures	1.06	.236
Graphing read aloud data	1.50	.985

*Note.* The scale used for these items ranged from 1(Easy) to 4 (Difficult).

<i>Item2.</i> How easy/difficult was it to use the <b>maze</b> measure for progress monitoring? Rate each of the components below:	<i>Mean</i>	<i>SD</i>
Administering read aloud measures	1.33	.840
Scoring read aloud measures	1.28	.826
Graphing read aloud data	1.61	.979

*Note.* The scale used for these items ranged from 1(Easy) to 4 (Difficult).

<i>Item3.</i> In what way did the following influence your use of OCR technology?	<i>Mean</i>	<i>SD</i>
Computer access	1.06	.236
Your computer skills	1.78	1.060
User-friendliness of OCR site	1.44	.705
Time constraints	2.82	1.185

*Note.* The scale used for these items ranged from 1(Made easy) to 4 (Made difficult).

<i>Item4.</i> In what way did the following influence your use of Moodle?	<i>Mean</i>	<i>SD</i>
Computer access	1.61	.979
Your computer skills	2.39	1.243
User-friendliness of OCR site	2.39	1.145
Time constraints	3.39	.916

*Note.* The scale used for these items ranged from 1(Made easy) to 4 (Made difficult).

	<i>Mean</i>	<i>SD</i>
<i>Item5</i> Do you think partner feedback through Moodle is a valuable resource for problem solving?	3.11	.900

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item6.</i> Based on your experience, to what extent are progress monitoring data from <b>read aloud</b> measures beneficial for planning instruction for members of the following groups?	<i>Mean</i>	<i>SD</i>
Students in Grades 1-3	3.69	.704
Students in Grades 4-6	3.50	.924
Students in Grade 7 & above	3.42	.996
Students with limited reading skills	3.50	.985
Students with higher reading skills	3.13	1.088
English Language Learners	3.31	1.078
Native English speakers	3.50	.894

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item7.</i> Based on your experience, to what extent are progress monitoring data from <i>maze</i> measures beneficial for planning instruction for members of the following groups?	<i>Mean</i>	<i>SD</i>
Students in Grades 1-3	2.71	1.105
Students in Grades 4-6	3.00	1.000
Students in Grade 7 & above	3.10	.994
Students with limited reading skills	2.56	1.199
Students with higher reading skills	2.94	1.124
English Language Learners	2.63	1.310
Native English speakers	2.87	1.187

*Note.* The scale used for these items ranged from 1(Not at all) to 4 (A lot).

<i>Item8.</i> In general, how frequently did you do the following?	<i>Mean</i>	<i>SD</i>
Collect progress-monitoring data	1.00	.000
Enter data to OCR graphs	1.56	.727
Examine OCR graphs	1.94	.998
Post on Moodle	2.00	1.095

*Note.* The scale used for these items is 1(Once per week), 2 (Once per month), 3 (Once per rotation) and 4 (Once during this study).

<i>Item8-1.</i> In the future how likely are you to use the following progress monitoring measures:	<i>Mean</i>	<i>SD</i>
Reading aloud	4.00	.000
Maze	3.00	1.138

*Note.* The scale used for these items ranged from 1(Not likely) to 4 (Very likely).

*Comments Teachers Made about Maze Strengths*

- I can have an idea of the student's passage comprehension.
- It helped confirm higher skilled readers' ability to read and comprehend at grade level.
- Well I think gaining info reg comprehension is great.
- Shows some real thinking and comprehension whe reading
- Allows to see more comprehension of students; more time given for students to read.
- good for comprehension; good for kid who can read at 2nd grade or above
- May have been useful if I could have readjusted the level.
- It has comprehension. I have two students on the opposite ends of the rading aloud range. One reads very well with an unknown amount of understanding. The other reads very poorly but with a better understanding than most. The maze helps with my assessment of comprehension. Especially with slow processing students who will guess to just keep things moving.
- If students read at grade level (or 1 yr behind) they can work at choosing the correct answer.
- Helps students prepare for variety of formal assessments
- Comprehension tracking is obvious; use of context clues
- It measures not only reading, but comprehension as well. Can be done individually or with a group.
- less time; group
- Allows teacher to do several students at the same time. More efficient monitoring.

*Comments Teachers Made about Maze Weaknesses*

- I don't think students got enough time. I noticed that after getting a few guesses at first they start focusing and the time is up.
- Some students were only successful on Maze if they read it aloud 1:1 with teacher listening - w/out that they'd race through, no self-correcting, guessing, etc.
- The district doesn't have Maze passages
- Very frustrating for the kids who are first learning to read. (under 3 grade readers); students often guessed.
- There continues to be guessing. I don't know if and when my stu are guessing: Should they do the maze orally?
- I think you would need another assessment besides this one to assess fluency.
- When you do the maze on a consistent basis there seems to be a transfer of making sure the sentence makes sense that is carried over into their other reading
- poor for very low readers- if they can't decode the words they can't say what fits best
- Not valid? Too difficult for my ELL student. Vocabulary at the level she was in was too difficult. (Ex.) never heard of "Yellowstone" before which impacted comprehension.

Perhaps a lower level would have been useful.

- Randomly circling words - not putting effort into it. Can't tell what the need is
- If a student has severe comprehension problems she will have trouble with maze progress monitoring; progress can't be seen easily
- don't hear students read; can skip as read; accuracy issue; 33% of getting correct
- Teacher does not hear the mistakes the student is making. Cannot analyze mistakes. Student could be getting correct answers through guessing. No standards, percentiles.

#### *Comments Teachers Made about Reading Aloud Strengths*

- Good for fluency and decoding
- Best when used with students receiving direct instruction on decoding skills - error analysis and sight work skills are apparent w/weekly CBMs
- We already do them for progress monitoring
- Can help them if they get stuck on a word; easier for the students; less frustrating.
- Very beneficial one on one reading. Allows miscue for word analysis, phonetic items that need to be taught, flow, expression, etc.
- Easy and fast to administer
- I am not sure that I would use it as a tool to show growth in comprehension. I think the scores really reflected the vocabulary that was being ask to be identified.
- good for fluency checks
- I strongly believe in using Read Alouds (CBM fluency). Great for monitoring progress or lack of progress. Also using moving median would be useful.
- Know what words give them problems; can determine what sounds give them problems and also which sight words they know.
- Helps monitor fluency
- Hearing them read; Hearing and seeing where the errors are; Can hear and see exactly what cues they are using
- It documents student progress for IEPs, etc; helps to make informed instructional decisions
- hear students read and can hear errors
- Allows teacher to hear and examine student's reading. Quick, easy measurement. District has percentiles for comparison to other students at grade level and standard expectations.

#### *Comments Teachers Made about Reading Aloud Weaknesses*

- Can't really tell about comprehension.
- 1st grade passages are too inconsistent in their degree of difficulty from one passage to another. Ex: A 3rd grade student can read 2nd grade passages w/more success and less variability in scores than the 1st grade passages.
- Not sure if they are understanding what they read.

- We tend to use as counting words only. Having the percentiles is so slick!
- In my opinion this is not a good assessment for very low readers and very high readers. Comprehension does not always correlate to fluency.
- One minute is not always enough time.
- Able to hear students read and listen for errors. Able to see progress or lack of it
- poor for students with comprehension trouble
- Not from study necessarily, but from my experiences: Need Spanish CBM's in fluency normed so it provides SERTS more info to make educ decisions. Fluency level - difficult for sp ed Gr 1 when they are emergent rdrs.
- I can't think of any!
- single student; more time to administer
- Takes time. Difficult to do if other students are in the room. Doesn't include comprehension.

## Appendix A

### Student Survey

This year you have monitored the progress of students with either reading aloud or maze measures. We are interested in your impressions about the two types of measures. In completing the following survey, please try to focus on \_\_\_\_\_ and the type of progress monitoring measure (read aloud or maze) used with that student.

1. To what extent has **weekly progress monitoring** helped you learn about \_\_\_\_\_'s reading growth in the following areas?

	Not at all			A lot
General Reading Skills	1	2	3	4
Phonemic Awareness: Sounds in spoken words	1	2	3	4
Phonics: Sound/letter relationships and decoding	1	2	3	4
Fluency: reading quickly, correctly, and with expression	1	2	3	4
Vocabulary: Word meaning	1	2	3	4
Comprehension: Understanding text	1	2	3	4
Other (please state): _____	1	2	3	4
_____	1	2	3	4

2. To what extent did \_\_\_\_\_'s **progress monitoring data** in reading influence changes in the following?

	Not at all			A lot
Total reading time	1	2	3	4
Type of instructional activities	1	2	3	4
Distribution of time allocated to instructional activities	1	2	3	4
Materials used	1	2	3	4
Student grouping	1	2	3	4
Motivation strategies	1	2	3	4
IEP goals/objectives	1	2	3	4
Other (please state): _____	1	2	3	4

3. **After reflecting on \_\_\_\_\_'s progress monitoring data**, if you were given the necessary resources and freedom (i.e., no time constraints, no specific ratio of teacher to students), to what extent would you make changes in the elements of \_\_\_\_\_'s instructional program listed below.

	Not at all			A lot
Total reading time	1	2	3	4
Type of instructional activities	1	2	3	4
Distribution of time allocated to instructional activities	1	2	3	4
Materials used	1	2	3	4
Student grouping	1	2	3	4
Motivation strategies	1	2	3	4
IEP goals/objectives	1	2	3	4
Federal setting	1	2	3	4
Other (please state): _____	1	2	3	4

4. To what extent did the following influence your judgments about \_\_\_\_\_'s improvement in reading?

	Not at all			A lot
Comparing this week's score to last week's score	1	2	3	4
Comparing performance level to goal	1	2	3	4
Examining growth (slope of the data) across weeks	1	2	3	4
Listening as student reads aloud	1	2	3	4
Watching as student reads silently	1	2	3	4
Noting the number and type of errors made	1	2	3	4

5. Suppose you were to provide recommendations for \_\_\_\_\_'s next special education teacher. **Based on the progress-monitoring data** you accumulated throughout this year, what instructional recommendations would you make for improving \_\_\_\_\_'s reading? Please suggest three or more instructional recommendations.

## Appendix B

### General Survey

Please rate the following items as they relate to your experience, in general, when using progress monitoring measures:

1. How easy/difficult was it to use the **read aloud** measure for progress monitoring? Rate each of the components below:

	Easy			Difficult
Administering read aloud measures	1	2	3	4
Scoring read aloud measures	1	2	3	4
Graphing read aloud data	1	2	3	4

2. How easy/difficult was it to use the **maze** measure for progress monitoring? Rate each of the components below:

	Easy			Difficult
Administering maze measures	1	2	3	4
Scoring maze measures	1	2	3	4
Graphing maze data	1	2	3	4

3. In what way did the following influence your use of OCR technology?

	Made easy			Made difficult
Computer access	1	2	3	4
Your computer skills	1	2	3	4
User-friendliness of OCR site	1	2	3	4
Time constraints	1	2	3	4

4. In what way did the following influence your use of Moodle?

	Not at all			A lot
	1	2	3	4
Computer access	1	2	3	4
Your computer skills	1	2	3	4
User-friendliness of Moodle site	1	2	3	4
Time constraints	1	2	3	4

5. Do you think partner feedback through Moodle is a valuable resource for problem solving?

	Not at all			A lot
	1	2	3	4

Please make comments that will help us improve potential future use of Moodle for data-sharing between teachers:

Comment 1:

Comment 2:

Comment 3:

6. Based on your experience, to what extent are progress monitoring data from *read aloud* measures beneficial for planning instruction for members of the following groups?

	Not at all			A lot
	1	2	3	4
Students in Grades 1-3	1	2	3	4
Students in Grades 4-6	1	2	3	4
Students in Grade 7 & above	1	2	3	4

Students with limited reading skills	1	2	3	4
Students with higher reading skills	1	2	3	4
English Language Learners	1	2	3	4
Native English speakers	1	2	3	4

7. Based on your experience, to what extent are progress monitoring data from *maze* measures beneficial for planning instruction for members of the following groups?

	Not at all			A lot
Students in Grades 1-3	1	2	3	4
Students in Grades 4-6	1	2	3	4
Students in Grade 7 & above	1	2	3	4
Students with limited reading skills	1	2	3	4
Students with higher reading skills	1	2	3	4
English Language Learners	1	2	3	4
Native English speakers	1	2	3	4

8. In general, how frequently did you do the following?

	Once per week	Once per month	Once per 6-week rotation	Once during the study
Collect progress-monitoring data	1	2	3	4
Enter data to OCR graphs	1	2	3	4
Examine OCR graphs	1	2	3	4
Post on Moodle	1	2	3	4

8. In the future how likely are you to use the following progress monitoring measures:

	Not likely			Very likely
Read aloud	1	2	3	4
Maze	1	2	3	4

9. We want you to give us your estimate of the amount of growth made this year by students you progress monitored in the study. Please list the students you progress monitored in order from those who made the most growth to those who made the least growth.

Most growth \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Least growth \_\_\_\_\_

10. Please tell us what you think are the strengths and weaknesses of the two types of progress monitoring measures:

**Maze**

Strengths:

Weaknesses:

**Read Aloud**

Strengths:

Weaknesses: