



Testing the Efficacy and Impact of a Selected PBS TeacherLine Course

Final Report

Prepared for
PBS TeacherLine

December 23, 2010

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Report

EXECUTIVE SUMMARY

This report presents findings from a two-year summative evaluation using an experimental research design to measure the impact of a six-week PBS TeacherLine Reading Fluency course on teacher and student outcomes. Data were collected over the two years through surveys, content knowledge assessments, and oral reading fluency assessments.

The major findings of the study were:

- Treatment students' oral reading fluency scores increased significantly more than control students' oral reading fluency scores from beginning of school year to end of school year, indicating that the course had a positive impact on student learning outcomes.
- The Reading Fluency course had a positive impact on treatment teachers' self-efficacy immediately following the course, but this effect declined over the ensuing school year.
- Teachers viewed the Reading Fluency course positively and felt that most course components were helpful.
- Teachers most frequently used knowledge gained during the course to help differentiate instruction. They were also most likely to draw upon the course material when working with small groups of students or single students.
- The Reading Fluency course did not lead to significant increases in content knowledge.

Limitations of the study were:

- The data used in this study did not allow us to fully assess the impact of the course on teaching practices.
- While we are confident that the course impacted student oral reading fluency scores, the process through which the course affects student outcomes is not fully understood. Our main hypothesis as to how the effects of the course would be transmitted to students (through increased teacher knowledge) was not supported by the data and no other data were collected to test alternative hypotheses.

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INTRODUCTION

After receiving a Ready to Teach grant from the U.S. Department of Education, PBS TeacherLine developed a suite of online graduate-level courses. The courses provide professional development opportunities in an accessible online format while helping teachers gain strategies and resources they can bring directly into the classroom.¹ Previous evaluation of PBS TeacherLine courses documented that TeacherLine removes barriers of access to high quality professional development opportunities, as well as barriers of time and place, to support sustained, collaborative peer and expert mentoring experiences that are difficult to achieve in traditional professional development settings.

In order to determine the impact of TeacherLine on academic achievement, PBS contracted with Hezel Associates, LLC, to conduct an evaluation of a PBS TeacherLine course. From September 2008 until December 2010, Hezel Associates assessed the efficacy of a PBS TeacherLine Teaching Reading Fluency course, focusing on the impact of the course on various teaching and learning outcomes.

PBS TeacherLine aims to increase teachers' access to professional development. The goal of the Reading Fluency course is to introduce important research about reading fluency instruction and to lead learning through strategies supporting students as they develop reading fluency. The course blends theory and research on fluency with application to each learner's own teaching. The six-week course, which targets reading fluency content, assessment and research-based techniques, also intends to increase teachers' technology comfort level and the extent to which they use technology in the classroom. Designed for second through fifth grade teachers, the course content addresses the *Standards for English Language Arts* developed by the National Council of Teachers of Education (NCTE) and International Reading Association (IRA). *Standards for English Language Arts* guide teachers in developing curricula and instruction that foster students' literacy development (see appendix A for syllabus containing a detailed course description).²

By course completion, teachers should be able to apply the following pedagogical knowledge in their classrooms:

- The three dimensions of reading fluency: accuracy, automatic processing, and prosody
- An understanding of how fluency instruction relates to students' comprehension
- A broadened repertoire of research-based strategies to build fluency based on modeling and repetition

¹ <http://www.pbs.org/teacherline/>

² 2005 PBS. All rights reserved. RDLA195 – Teaching Reading Fluency (Grades 2-5)

- Knowledge of techniques that parents can use at home to encourage reading fluency in their child
- Methods of assessing students' fluency
- A rubric-based technique for evaluating fluency instruction in the classroom

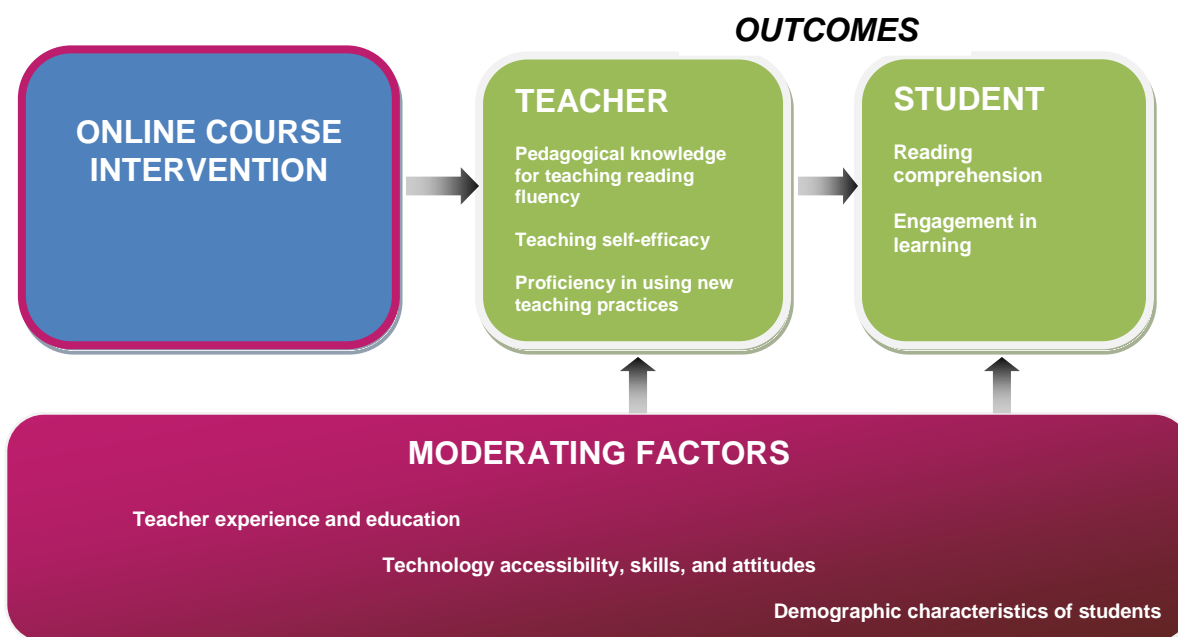
This final report summarizes the two-year evaluation of the PBS TeacherLine Teaching Reading Fluency course.

METHODS

A. RESEARCH QUESTIONS

The PBS TeacherLine logic model below presents the theoretical framework guiding this evaluation (see Figure 1). Dependent variables include teachers' pedagogical knowledge for teaching reading, self-efficacy in teaching reading, and proficiency in using new teaching practices. Student-focused dependent variables include students' reading comprehension, decoding skills, and attitudes toward reading. Using a variety of means to measure teacher and student variables, the evaluation also allowed us to determine the extent to which the effectiveness of the PBS TeacherLine Reading Fluency Course is influenced by contextual factors such as teachers' experience and education, technology accessibility, and student attitudes and demographic characteristics.

Figure 1. PBS TeacherLine conceptual model



During this evaluation, we investigated the following four research questions:

1. What impact does the PBS TeacherLine Reading Fluency course have on pedagogical knowledge for teaching reading fluency, self-efficacy in teaching reading fluency, and proficiency in using reading fluency teaching strategies?
2. What impact does the PBS TeacherLine Reading Fluency course have on student reading fluency and engagement in reading?
3. To what extent do the effects of the PBS TeacherLine Reading Fluency course on teaching depend on characteristics of teachers and/or students being taught, and/or on the amount and quality of reading materials available?
4. How do the effects of the PBS TeacherLine Reading Fluency course on teaching change over the course of the school year?

B. INSTRUMENTATION AND DATA COLLECTION

1. Teachers

Recruitment occurred nationwide and began in June 2008. Participation opportunities were extended to second and third grade teachers only. Due to the desired sample size recruitment focused on large school districts. Using multiple modalities to accommodate districts' communication preference, evaluators mailed letters to districts and followed up with phone calls and emails. In total, 41 sites were contacted up to four times during the recruitment process.

As this study relies on an experimental design, evaluators randomly assigned teachers to a treatment group or a control group. We successfully recruited 107 participants who completed all required baseline measures. In anticipation of attrition, more teachers were assigned to the treatment group resulting in 67 teachers in the treatment group and 40 in the control group at study onset.

While all 67 treatment teachers were scheduled to take the PBS TeacherLine course in January 2009, 26 did not complete the course and an additional 11 dropped out of the study during the 2009-10 school year. Prior completion of an online course had no bearing on treatment teachers' completion of the PBS TeacherLine reading fluency course, as 66.1 percent of teachers who had previously taken an online class completed the course while 62.1 percent of teachers who had not previously taken an online class completed the course.³

Of the 40 control teachers, 11 dropped out of the study during the 2009-2010 school year. As a result of this attrition, the study had a final total of 59 participants, with 30 in the treatment group and 29 in the control group.

Control group teachers were given the opportunity to take a reading course after the evaluation ended in July 2010. In addition, control group teachers received a voucher for a free non-reading course of their choice to be taken in the fall of 2009. This allowed for a comparison of treatment and control group teachers, while still providing each teacher in the study with the opportunity to participate in at least one online course, free of charge. In addition to the one or two PBS TeacherLine courses they were able to take free of charge (\$180-\$360 value), teachers received up to \$230 in honoraria, issued in installments after each data collection period.

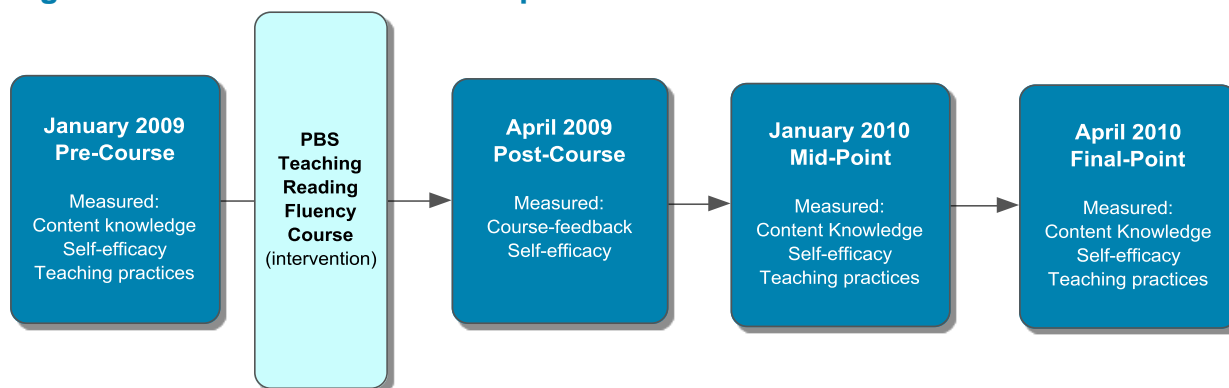
³ $\chi^2 = 0.69; p > .05$ (df =1)

a. Content Knowledge for Teaching Reading

Evaluators used the Content Knowledge for Teaching Reading assessment to measure teachers' content knowledge. Phelps and Schilling developed the Content Knowledge for Teaching Reading assessment through the Study of Instructional Improvement.⁴ Items on this assessment fall into two topic areas (comprehension and word analysis) and measure three types of content knowledge (knowledge of content; knowledge of students and content; and knowledge of teaching and content). Hezel Associates received a 48-item version of the Content Knowledge for Teaching Reading assessment and permission from the authors to use the instrument (see Appendix B).⁵

Evaluators graded and summed teachers' responses to create a content knowledge score that could range from a low score of zero to a high score of 48. The assessment was administered to teachers in both the treatment and control groups three times during the study: pre-course, mid-point, and final-point (see Figure 2).

Figure 2. Teacher data collection points



b. Teacher surveys

Teacher surveys were designed for this project and were administered four times during the study: pre-course, post-course, mid-point, and final-point (see Figure 2). The teacher survey consisted of a core set of questions that were asked at all data collection points with additional questions of interest included at various times. The surveys collected demographic data, information about teaching practices, and measured self-efficacy for teaching reading fluency. A copy of the final-point survey is provided in Appendix C. One teacher in the control group did not complete the teacher survey at all four points and has been removed from the data set for some analyses, resulting in a total of 58 teachers.

One of the core elements of the teacher survey is the self-efficacy measure. Teachers were asked to respond to a series of ten questions using a scale from 1 (no confidence)

⁴Phelps, G., & Schilling, S. (2004). Developing measures of content knowledge for teaching reading. *Elementary School Journal*, 105, 31-48.

⁵ Content Knowledge for Teaching Reading assessment (copyright 2002) used with permission from Study of Instructional Improvement (SII)/Consortium for Policy Research in Education (CPRE).

to 9 (a great deal of confidence; see Table 1). These questions were adapted from the Teacher Sense of Efficacy Scale.⁶ We summed teachers’ responses to these questions to construct a self-efficacy score that could range from 10 points to 90 points.

Table 1. Questions measuring self-efficacy in teaching reading

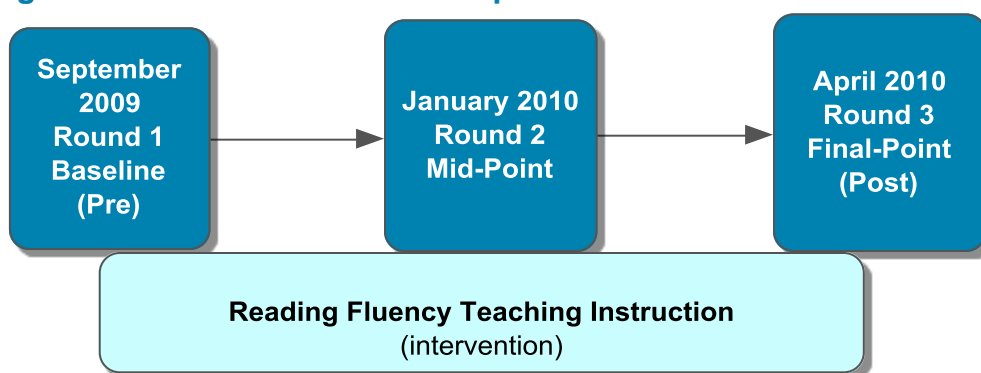
Scale: 1 (none at all) to 9 (a great deal)
How much can you do to get students to believe they can do well in reading?
How well can you know how much progress each students makes in reading fluency over time?
How much can you do to motivate students who show low interest in reading?
How well can you teach different types of learners to read fluently?
To what extent can you help the most struggling readers to read fluently?
To what extent can you help English Language learners to read fluently?
How well can you get all students in your class to read fluently?
To what extent can you use a variety of reading assessment strategies?
To what extent do you feel you have sufficient time and resources to improve the reading fluency of your students?
How much can you assist families in helping children improve reading fluency?

2. Students

Students were classified as being in the treatment group or the control group based on their teacher’s status. While not all students completed each assessment, there were a total of 302 students in treatment classes and 189 students in control classes, for a total of 491 students in the study.

During the 2009-2010 school year, students completed an Oral Reading Fluency (ORF) Assessment and a reading attitude survey in September 2009 (baseline), January 2010 (mid-point) and April 2010 (final-point; see Figure 3).

Figure 3. Student data collection points



⁶ Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82, 81-91.

a. Elementary Reading Attitude Survey

We used the Elementary Reading Attitudes Survey (ERAS), developed by McKenna & Kear, to measure student attitudes toward recreational and academic reading.⁷ The survey targets students in grades K-6 and consists of 20 questions with pictorial response options. Images of Garfield provide a visual set of cues for the students in using the four-point response scale, ranging from “happiest” (which was assigned a value of 4) to “very upset” (which was assigned a value of 1). The scores were then summed across the 20 questions into an overall reading attitude score that could range from a low of 20 points to a high of 80 points.

Four hundred seventy-two students across the seven school districts in the study completed the ERAS at each administration. Two hundred eighty-seven were in the treatment group and 185 were in the control group. Teachers administered the paper ERAS to each participating student during class time and it was estimated that the ERAS takes 15 minutes to complete. A copy of the ERAS can be found in appendix D.

b. Oral reading fluency assessment

To measure students’ reading achievement, the teachers conducted individualized ORF assessments. The assessment consisted of one-on-one evaluations of each student’s ability to read an age-appropriate sample of text aloud for one minute. In order to quantify students’ ORF, the teachers used a scale developed as part of the National Assessment of Education Progress (NAEP). The NAEP ORF scale ranges from Level 1 (lowest ability) to Level 4 (highest ability; see Table 2).

Four hundred and eighty-six students across seven participating districts completed all three ORF assessments. Two hundred ninety-nine were in the treatment group and 187 were in control group. Assessments took an estimated five minutes per student (see Appendix E).

⁷ McKenna, M.C. & Kear, D.J. (1990, May). Measuring attitude toward reading: A new tool for teachers. *The Reading Teacher*, 43 (8). 626-639. <http://dxdoi.org/1-1598/RT.43.8.3>. Copyright International Reading Association. All rights reserved.

Table 2. NAEP ORF scale*

Level	
Level 4	<ul style="list-style-type: none"> • Reads primarily in larger, meaningful phrase groups. • Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story. • Preservation of the author's syntax is consistent. • Some or most of the story is read with expressive interpretation.
Level 3	<ul style="list-style-type: none"> • Reads primarily in three- or four-word phrase groups. • Some smaller groupings may be present. • Majority of phrasing seems appropriate and preserves the syntax of the author. • Little or no expressive interpretation is present.
Level 2	<ul style="list-style-type: none"> • Reads primarily in two-word phrases with some three- or four-word groupings. • Some word-by-word reading may be present. • Word groupings may seem awkward and unrelated to larger context of sentence or passage.
Level 1	<ul style="list-style-type: none"> • Reads primarily word-by-word. • Occasional two-word or three-word phrases may occur-but these are infrequent and/or they do not preserve meaningful syntax.

*Source: U.S. Department of Education, National Center for Education Statistics. *Listening to Children Read Aloud*, 15. Washington, DC: 1995.

c. Dynamic Indicators of Basic Early Literacy Skills—Oral Reading Fluency sub-scale, 6th Edition (DIBELS-6)

In addition to the data described above, DIBELS (Dynamic Indicators of Basic Early Literacy Skills) ORF scores were provided by Jefferson County, Colorado for 17 teachers. The DIBELS are “a set of procedures and measures for assessing the acquisition of early literacy skills from kindergarten through sixth grade.” Similar to the previous ORF assessment, the DIBELS ORF test measures students’ accuracy and fluency in reading connected text aloud. It is designed to “(a) identify children who may need additional instructional support, and (b) monitor progress toward instructional goals.”⁸ Teachers measured students’ ORF by having them read a passage out loud for one minute and students were categorized based on number of correct words read (see Table 3). DIBELS ORF scores were provided for September 2009, January 2010 and May 2010 test administrations.

Table 3. DIBELS ORF benchmarks*

Grade Level	Status	Number of Words Read		
		Beginning of Year (Months 1-3)	Middle of Year (Months 4-6)	End of Year (Months 7-10)
Second Grade	At Risk	0-25	0-51	0-69
	Some Risk	26-43	52-67	70-89
	Low Risk	44 and above	68 and above	90 and above
Third Grade	At Risk	0-52	0-66	0-79
	Some Risk	53-76	67-91	80-109
	Low Risk	77 and above	92 and above	110 and above

*Source: <https://dibels.uoregon.edu/benchmark.php>

⁸ <https://dibels.uoregon.edu/measures/orf.php>.

C. DATA ANALYSIS

This evaluation is summative in nature and employed an experimental research design including 30 teachers randomly assigned to a treatment group and 29 teachers randomly assigned to a control group. Treatment teachers completed a PBS TeacherLine Reading Fluency course in January 2009 and incorporated new reading concepts and content knowledge into classroom instruction during the following school year (2009-10). Comparison teachers did not receive reading fluency instruction through PBS TeacherLine. This research design allowed us to measure the effects of the PBS TeacherLine Reading Fluency course by measuring differences between control and treatment groups.

1. Teacher Data

Descriptive statistics including means, frequencies, and cross-tabulations were used to examine teacher demographics and some moderating factors. Inferential statistics were used to examine impact of the course on teachers' content knowledge and self-efficacy in teaching reading.

We used *t*-tests to compare changes in treatment teachers' content knowledge and self-efficacy scores to changes in control teachers' content knowledge and self-efficacy scores. This allowed us to compare the magnitude of change in the treatment groups' self-efficacy and content knowledge scores to the magnitude of change in the control groups' self-efficacy and content knowledge scores.

For research question three, additional inferential statistics were used to explore the influence of various external factors on the impact of the course on students' ORF scores. External factors examined in this research question included percentage of English Language Learners (ELL) or Individualized Education Program (IEP) students, teacher level of comfort with technology and teaching experience. Lastly, we compared teachers with access to high quality resources to teachers who do not have access to high quality reading materials.

2. Student Data

Descriptive statistics were used to summarize student demographics. Inferential statistics were used to compare changes in treatment group students' ORF scores and reading attitude scores to changes in control group students' ORF scores and reading attitude scores. Additional inferential and descriptive statistics were used as necessary to analyze and explore relationships between and among variables.

RESULTS

A. DEMOGRAPHIC INFORMATION

1. Teachers

This evaluation included 59 teachers from seven districts in five states (see Appendix F for the list of participating districts). Eighty eight percent of participants taught second or third grade during the 2009-10 school year.⁹ While the small percentage of teachers who were assigned to other grades in 2009-10 are included in the teacher analysis, only second and third grade students are included in the student analysis.

Across the sample, 38.9 percent of teachers have 11 or more years of teaching experience, 24.1 percent have six to ten years of teaching experience, and 37.1 percent have five years or less of teaching experience. More than half of the teachers (57.6%) have a Master's degree and 33.9 percent have a Bachelor's degree with some graduate credit. Nearly three quarters (72.7%) described their undergraduate degree as education-related.¹⁰ Two-thirds of the graduate degrees reported were in curriculum and instruction (24.3%), education (21.6%), or elementary education (21.6%).

The majority of teachers identified themselves as white (87.9%). During the 2009-10 school year, each teacher delivered reading fluency instruction to an average of 19.5 students.

2. Students

As the PBS TeacherLine course targets second and third grade students, students in other grades were not included in the reading assessment analyses. There is a nearly even distribution of students between second and third grade in the study, with 50.3% of the sample in third grade. There also is a similarly even distribution of males and females (50.5% and 49.5%, respectively) in the data set. On average, seven students per classroom had an individualized education program¹¹ (range: 0 to 20) and six students were English Language Learners (range: 0 to 28).

⁹ Because teachers entered the study during the 2008-09 school year, some of the teachers in the sample were eligible for the study as second or third grade teachers upon entry but then moved to other grades in the following year.

¹⁰ Degrees include education, early childhood education, elementary education, music education, science education and physical education.

¹¹ The term individualized education program refers to programs that target students with learning disabilities.

B. WHAT IMPACT DOES A PBS TEACHERLINE READING FLUENCY COURSE HAVE ON PEDAGOGICAL KNOWLEDGE FOR TEACHING READING FLUENCY, SELF-EFFICACY IN TEACHING READING FLUENCY, AND PROFICIENCY IN USING READING FLUENCY TEACHING STRATEGIES?

1. Impact on pedagogical knowledge for teaching reading fluency

Treatment and control group teachers scored similarly on the pre-course Content Knowledge in Teaching Reading assessment, with no statistically significant difference between their scores at baseline.¹²

In January 2010, nearly one year after the PBS TeacherLine reading fluency course, teachers' content knowledge was re-tested. Between the baseline and the January 2010 assessment, both groups exhibited an increase in content knowledge. Treatment group content knowledge scores increased more than the control group content knowledge scores (1.6 increase and 0.6 increase, respectively; see Table 4). Though the increase in the treatment group's content knowledge was larger than the control group's increase, the difference was not statistically significant.¹³ The lack of a statistically significant difference between the increases means we cannot associate the increase in treatment group teachers' content knowledge with their participation in the PBS TeacherLine Reading Fluency course.

Table 4. Content knowledge scores

Group		Min	Max	Mean	Mean Change
Treatment (n=30)	Pre-course	25	42	34.5	1.6
	Mid-point	26	42	36.1	
Control (n=28)	Pre-course	17	41	32.7	0.6
	Mid-point	20	40	33.3	

2. Impact on self-efficacy in teaching reading fluency

A series of 10 questions placed on a 9-point scale ranging from 1 (no confidence) to 9 (a great deal of confidence) was used to measure teachers' self-efficacy in teaching reading. Before treatment teachers completed the PBS TeacherLine course (at baseline), the treatment and the control group teachers scored alike on the reading fluency self-efficacy assessment. Following their participation in the PBS TeacherLine reading fluency course, the treatment group teachers' self-efficacy scores increased by an average of 9.6 points, while the control group teachers' self-efficacy scores increased by an average of 2.3 points over the same time period (see Table 5).

¹² $t(49) = 1.43, p > 0.05$ (two-tailed), independent samples

¹³ $t(57) = 1.09, p > .05$ (two-tailed), independent samples

Table 5. Teachers’ self-efficacy scores for teaching reading fluency*

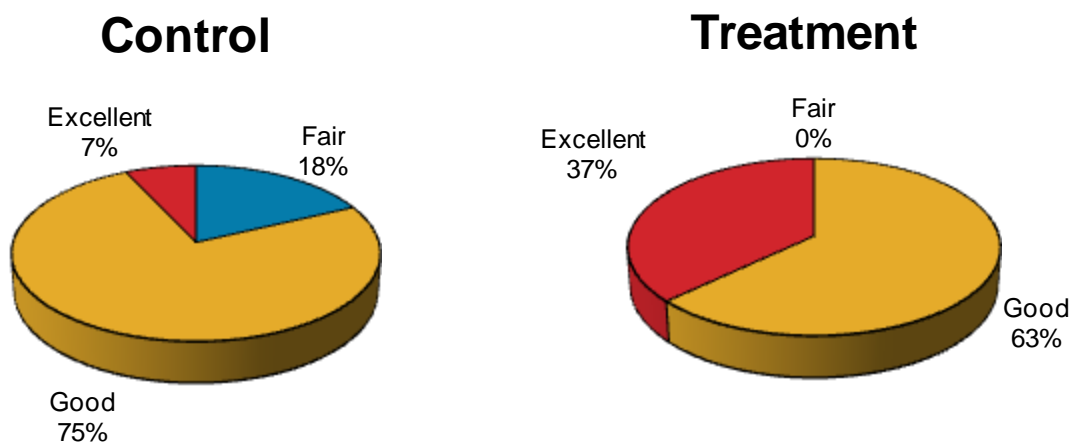
Group		Min	Max	Mean	Mean Change
Treatment (n=30)	Pre-course	42	80	64.4	9.6
	Post-course	58	90	74.0	
Control (n=28)	Pre-course	46	82	65.6	2.3
	Post-course	47	90	67.9	

*Self-efficacy scale ranged from 1-9, with 1=none at all, 3=very little, 5=some degree, 7=quite a bit, 9=a great deal

The increase in treatment groups’ self-efficacy from pre- to post-course was significantly greater than the increase in control group teachers’ self-efficacy over the same period.¹⁴ The statistically significant difference in the increases supports the conclusion that participation in the Reading Fluency course has a positive effect on teachers’ reported self-efficacy in teaching reading.

In addition to the self-efficacy scale, teachers also rated their overall ability to teach reading fluency on a scale of weak, fair, good, or excellent. After completing the PBS TeacherLine course, 36.7 percent of treatment teachers rated their overall ability to teach reading fluency as “excellent.” Less than ten percent (7.1%) of the control group teachers rated their overall ability to teaching reading as “excellent.” Similarly, zero treatment teachers rated their ability as “fair,” whereas 18 percent of control group rated their overall ability as “fair” (see Figure 4).

Figure 4. Self-rated overall ability to teaching reading fluency, post-course

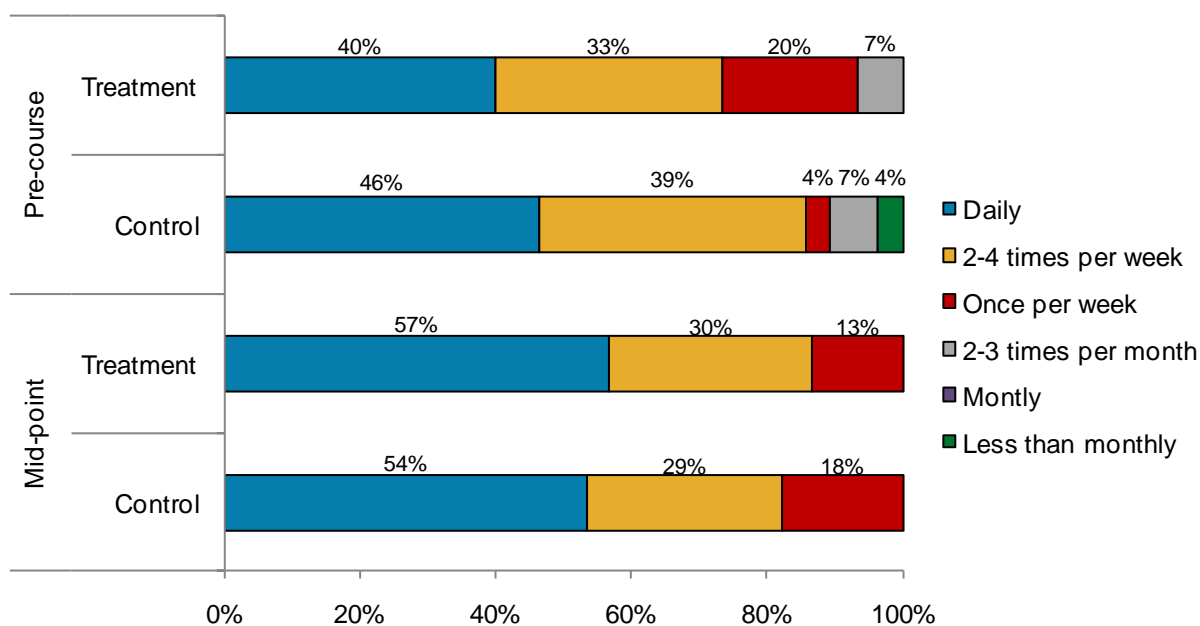


¹⁴ $t(56) = -2.88, p < .05$ (two-tailed), independent samples

3. Impacts on proficiency in using reading fluency teaching strategies

In the teacher survey, teachers reported how frequently they focused on reading fluency instruction in their teaching. The percentage of teachers in the treatment group who focused on reading fluency daily increased by 17 percentage points between the pre-course and mid-point surveys. In contrast, the percentage of control group teachers who focused on reading fluency instruction daily only increased by 8 percentage points (see Figure 5).

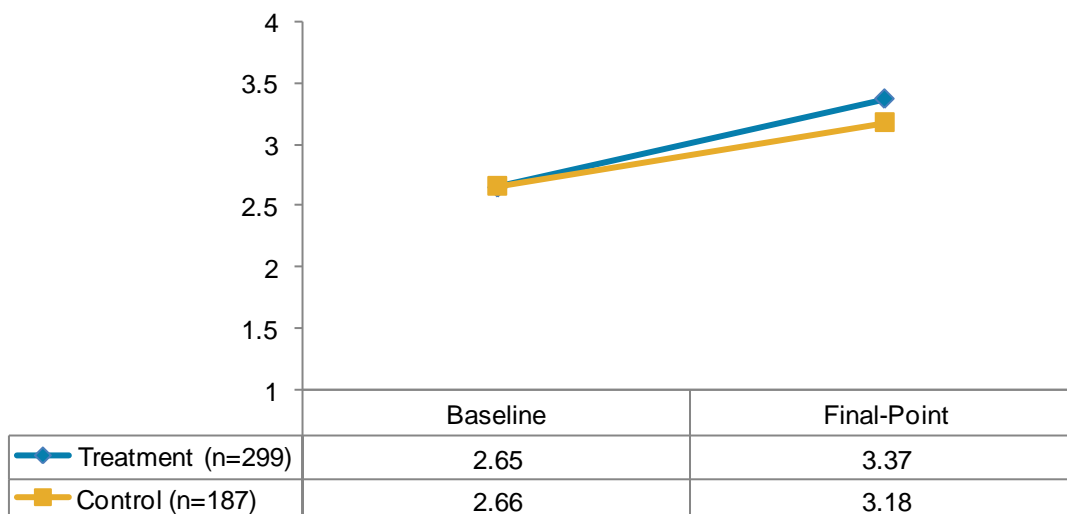
Figure 5. How often do you focus on reading fluency instruction in your teaching?



C. WHAT IMPACT DOES THE PBS TEACHERLINE READING FLUENCY COURSE HAVE ON STUDENT READING FLUENCY AND ENGAGEMENT IN READING?

1. Student oral reading fluency

Students in the treatment group and the control groups performed similarly on baseline ORF assessments with treatment students earning a mean ORF score of 2.65 and control students earning a mean ORF score of 2.66. On the final ORF assessment, the average score increased in both groups, with the treatment group increasing by an average of 0.72 points and the control group by an average of 0.52 points (see Figure 6).

Figure 6. Comparing treatment and control students' ORF scores

Statistical analyses verify that, from baseline to final-point, the increase in treatment students' ORF scores is significantly greater than the increase in control students' ORF scores.¹⁵ As the average increase in ORF scores for treatment students is significantly greater than for the control students, the data strongly suggest that the teachers' participation in the PBS TeacherLine Reading Fluency Course has a positive effect on student ORF scores.

Supplemental analyses showed that there was no significant difference between the changes in the ORF scores for the treatment students and the control students between baseline and mid-point assessments.¹⁶ This most likely indicates that the effects of the PBS TeacherLine course on students take a significant amount of time to manifest and that short-term evaluations of the program's effects may fail to detect the full impact of the program.

While the ORF scores for both second and third grade students in the treatment group increased significantly, the increase for second graders was significantly greater than the increase for third graders (see Figure 7). As one might expect, second-graders' ORF scores averaged much lower than third-graders' scores at baseline. However, in both the mid-point and final-point assessments, the averages for the second- and third-graders were similar, with the average increase for second-graders larger than the average increase for third-graders both from baseline to mid-point¹⁷ and baseline to final-point.¹⁸

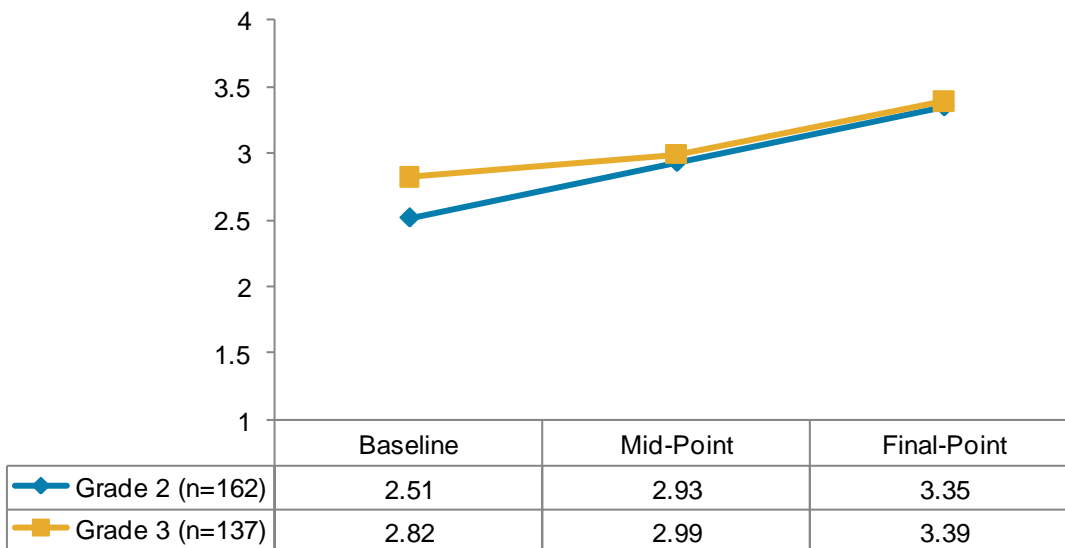
¹⁵ $t(354) = 2.82, p < .01$, independent samples, two-tailed

¹⁶ $t(484) = -1.37, p > .05$, independent samples, two-tailed

¹⁷ $t(291) = 2.96, p < .01$, independent samples, two-tailed

¹⁸ $t(289) = 3.59, p < .001$, independent samples, two-tailed

Figure 7. Comparing 2nd and 3rd grade treatment students' ORF scores



2. Engagement in reading

As described in the methods section of this report, the ERAS measured students' attitudes toward reading. The overall score on the ERAS could range from 20 to 80, with higher scores indicating more positive attitudes towards reading.

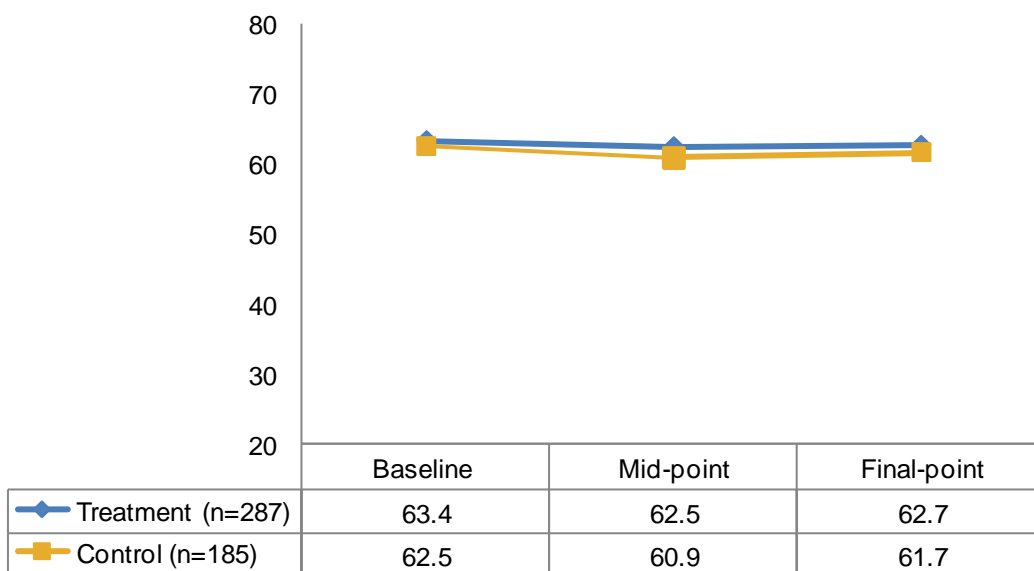
On average, student attitudes towards reading became slightly less positive over the course of the school year for both groups. At baseline, the average score in the treatment group was 63.4 while the control group average was 62.5 (see Figure 8). Students' ERAS scores changed slightly from baseline to mid-point and final-point; however, differences in change scores between the control and treatment groups were not found to be significant at any data collection point (baseline to mid-point,¹⁹ baseline to final-point,²⁰ and mid-point to final-point²¹). Therefore, teacher participation in the PBS TeacherLine course does not appear to have impacted student attitudes toward reading.

¹⁹ $t(470) = 0.58, p > .05$, independent samples, two-tailed

²⁰ $t(338) = 0.07, p > .05$, independent samples, two-tailed

²¹ $t(470) = -0.56, p > .05$, independent samples, two-tailed

Figure 8. Students' engagement in reading



D. TO WHAT EXTENT DOES THE IMPACT OF THE PBS TEACHERLINE COURSE DEPEND ON CHARACTERISTICS OF THE TEACHERS AND STUDENTS BEING TAUGHT, AND ON THE AMOUNT AND QUALITY OF READING MATERIALS AVAILABLE?

In general, the effects of the TeacherLine course were not moderated by other factors, such as teacher or student characteristics, resource availability, or teacher comfort with technology. While the teacher survey revealed substantial differences in the quality and availability of resources across schools, neither of these factors influenced the impact of the PBS TeacherLine Reading Fluency course on student ORF scores. Similarly, statistical analysis suggests that the impact of the PBS TeacherLine course on student ORF scores is not dependent on teachers' technology comfort level nor does low technology comfort level appear to impede teachers' ability to complete the online course.

One factor that does appear to influence the impact of the PBS TeacherLine courses on student ORF scores is teaching experience. Teachers with more than ten years of teaching experience increased their classroom ORF scores by an average of 0.78 points, compared to teachers with ten years of teaching experience or less who increased their classroom ORF scores by 0.66 points. This difference is statistically significant, meaning that teachers who already have substantial teaching experience may be more capable of transferring course information into student learning outcomes.²²

²² t (291) = -3.453, p < 0.001

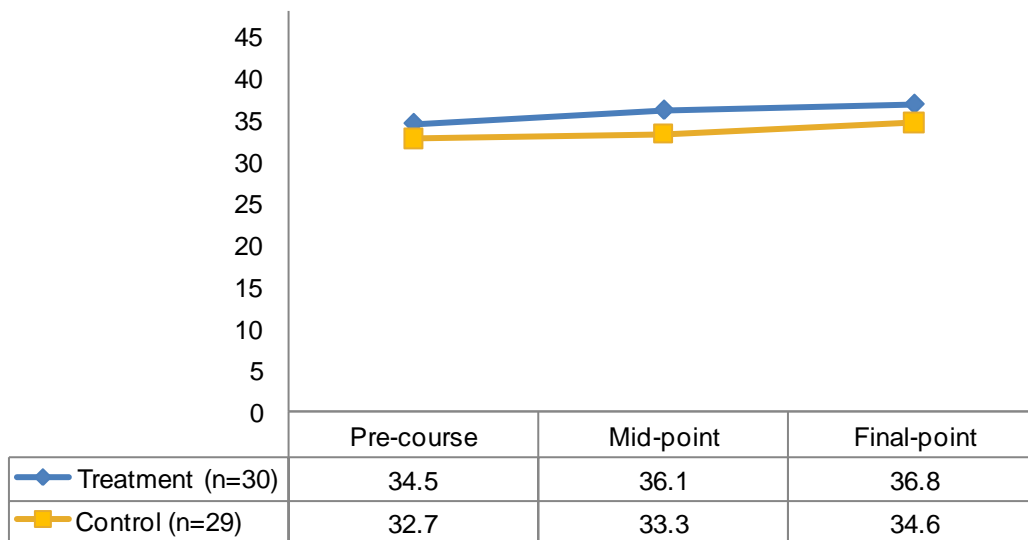
In order to determine whether the percentage of ELL students in a classroom had an effect on the impact of the program, classes were divided into two categories: zero to 20 percent and more than 20 percent ELL students. Analysis showed that the impact of the course was similar across both groups. Similarly, classes were divided between those with more than 20 percent IEP students and those with 20 percent or fewer IEP students. Once again, no differences were found between the groups.

E. HOW DO THE EFFECTS OF THE PBS TEACHERLINE COURSE ON TEACHING READING FLUENCY TEACHING CHANGE OVER THE COURSE OF THE SCHOOL YEAR? DOES THE EFFECT INCREASE, DECREASE OR STAY THE SAME THROUGH THE NEXT SCHOOL YEAR?

1. Impact on pedagogical knowledge for teaching reading fluency

Treatment teachers’ increase in pedagogical knowledge for teaching reading was not significantly higher than the increase in control group teachers’ pedagogical knowledge for teaching reading. While both groups’ content knowledge scores increased at each data collection point (see Figure 9), the magnitude of the change was similar for both groups. Therefore, the treatment group’s increase cannot be attributed to the PBS TeacherLine course.

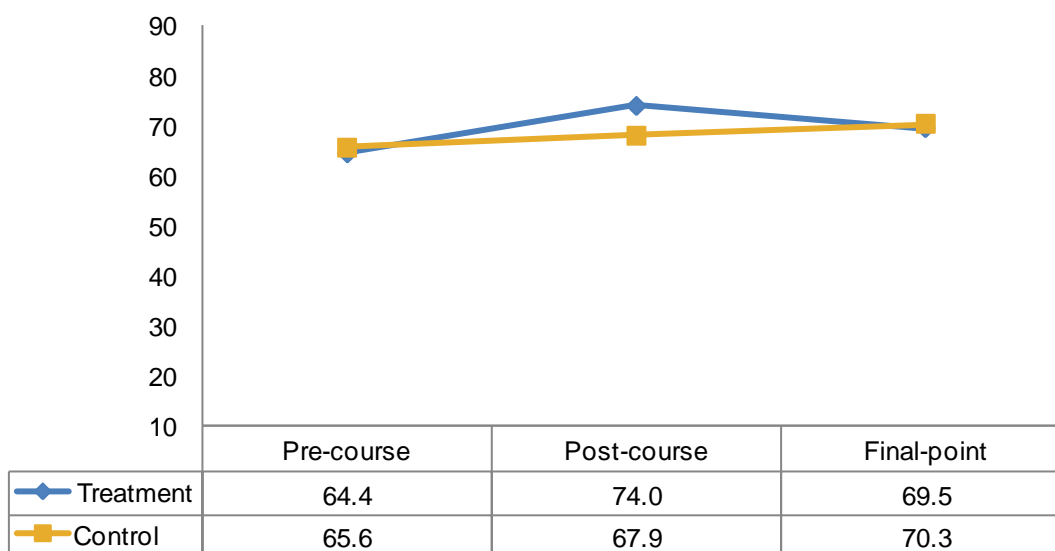
Figure 9. Teachers’ Content Knowledge Scores



2. Impact on self-efficacy in teaching reading fluency

In contrast to the pedagogical knowledge measure, the course had a significant effect on self-efficacy in teaching reading fluency from pre-course to post-course.²³ When examining the impact across a broader period, however, we see that the effect does not persist over the ensuing school year (see Figure 10). When looking at change from post-course to final-point, the average score for the treatment group declines (from 74.0 to 69.5) and becomes virtually equal to the control group score at the same point.²⁴ Therefore, it appears that while teachers experience a significant boost in their self-efficacy immediately after taking the course, this effect does not persist across the ensuing school year.

Figure 10. Teachers' self-efficacy scores for teaching reading fluency*



In addition to the comprehensive self-efficacy scores, teachers were also asked to rate their ability to teach reading fluency on a four-point scale (1=weak; 2=fair; 3=good; 4=excellent). The difference in the change on this score between treatment and control group from pre- to post-course was significant;²⁵ however, the difference was not significant from pre-course to mid- or final-point.²⁶ As was the case for the self-efficacy scores, treatment teachers showed significant improvement in their perceived ability to teach reading fluency immediately following the completion of the PBS TeacherLine course, but their perceived ability decreased by mid-point and final-point, while control group teachers' self-rated abilities increased throughout the year. At final-point, scores

²³ $t(56) = -2.88, p < .01$, independent samples, two-tailed

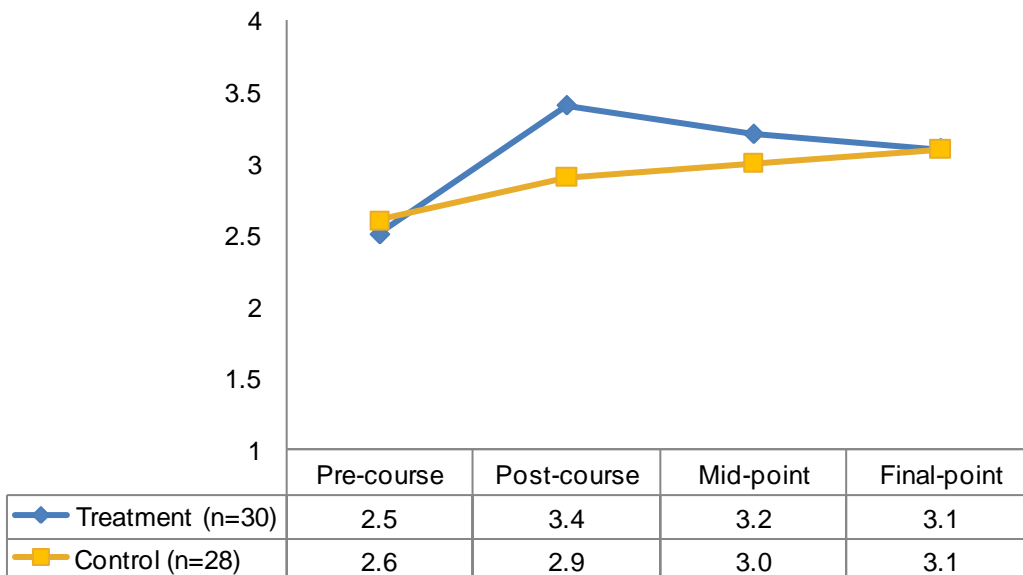
²⁴ $t(56) = -0.14, p > .05$, independent samples, two-tailed

²⁵ $t(56) = -3.50, p < .001$, independent samples, two-tailed

²⁶ Pre-course to mid-point: $t(56) = -1.83, p > .05$, independent samples, two-tailed; pre-course to final-point: $t(56) = -0.49, p > .05$, independent samples, two-tailed

were found to be very similar, thus indicating that the effect on teachers’ ability to teach reading fluency diminishes with time (see Figure 11).

Figure 11. Teachers’ perception of their ability to teach reading fluency*

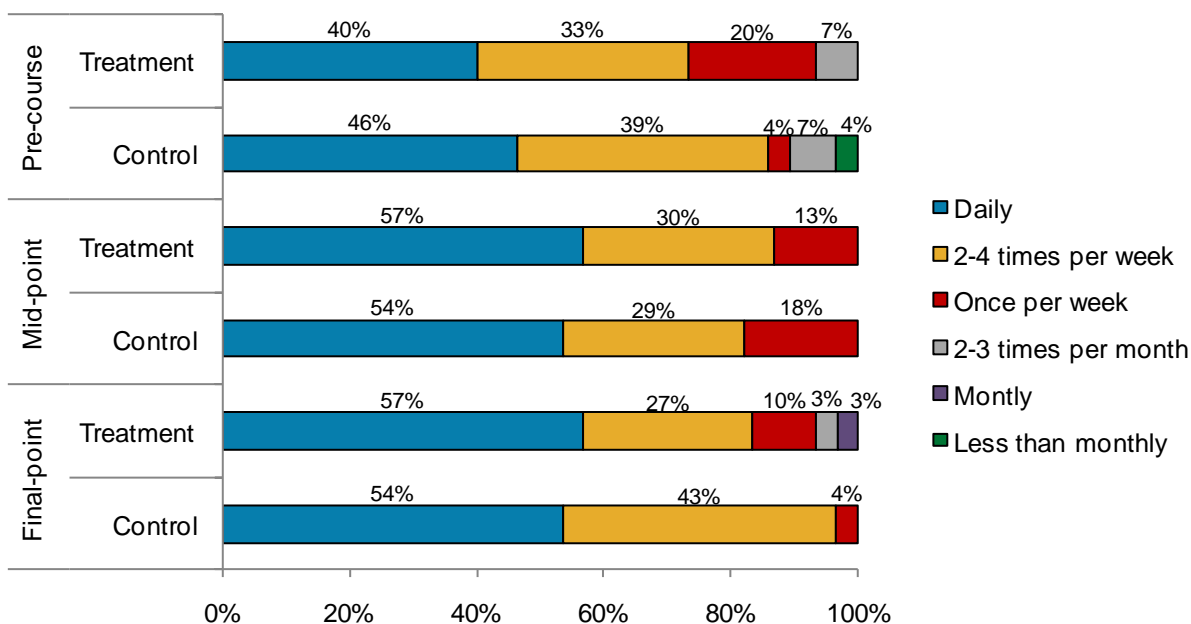


*Scale: 1 = weak, 2 = fair, 3 = good, 4 = excellent

3. Impact on proficiency in using reading fluency teaching strategies

As previously mentioned, both groups reported that they increased their frequency of focus on reading fluency instruction in their teaching from pre-course to mid-point, rendering no considerable impact from the PBS TeacherLine course. Comparing the mid-point to the end of the year (see Figure 12), the percentage of teachers focusing daily on reading fluency instruction did not change for either group. While there were some small shifts downward in the frequency of reading fluency instruction for treatment teachers at the lower end of the distribution and some increases in frequency for control teachers in this same range, the general conclusions made with the mid-point data also hold for the final-point data. In short, both groups increased their frequency of reading fluency instruction during the study period and the differences between the groups is not large enough to conclude that the TeacherLine course had a substantial effect on frequency of reading fluency instruction, either immediately or over the long term.

Figure 12. Teachers’ self-reported frequency of focus on reading fluency in instruction



F. READING FLUENCY COURSE FEEDBACK

Following the Reading Fluency online course, teachers generally responded positively when asked about the course. Table 6 shows that nearly all of the teachers agreed with the positive statements on the course evaluation module. One in three teachers felt that the course moved too quickly and while it would be ideal for no teachers to have agreed with this last statement, we believe this indicates the need only to make small adjustments to the pacing of the course and not a major overhaul.

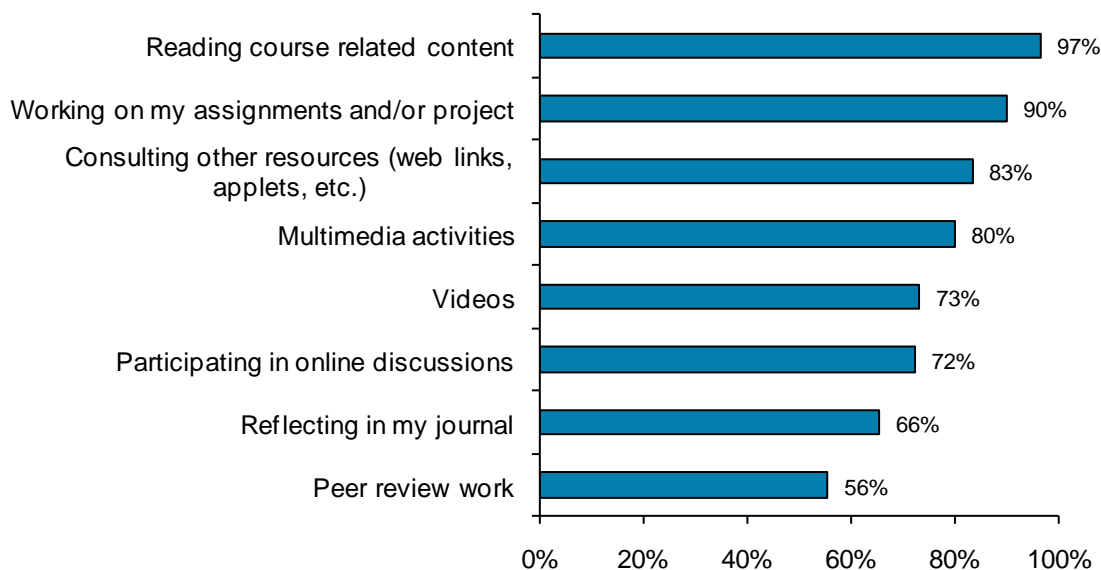
Table 6. Teachers’ feedback on Reading Fluency course (n=30)

Statements about PBS TeacherLine Reading Fluency course:	Percent Agree*
The course facilitator was well-prepared	100.0%
When participating in class, I had the opportunity to learn from my peers	100.0%
The material covered in the course was appropriate for my grade level	100.0%
I feel the instructional strategies I learned in this class will influence students’ reading fluency	100.0%
The course learning objectives were clear	96.6%
I had the opportunity to learn Reading Fluency content and instructional strategies in multiple ways	96.6%
The reading assigned during the course contributed to my learning experience	96.6%
I gained new knowledge and/or skills that I can apply to my current position	96.6%
Overall, the class was useful to me	96.6%
The material covered in the course was appropriate for differentiation	93.3%
The class covered material too quickly	33.3%

*Percent Agree includes those who selected strongly agree or agree. Other response options were disagree and strongly disagree.

Figure 13 shows that a majority of teachers felt that all of the course components were helpful to their overall learning, with *reading course related content* and *working on assignments* getting the highest ratings. While *peer review work* and *reflecting in my journal* were considered helpful by the smallest percentage of teachers, more teachers considered even these items helpful than did not.

Figure 13. Teachers’ assessment of helpfulness* of course components on overall learning (n=30)



*Helpfulness includes those who selected *very helpful* or *moderately helpful*. Other response options were *neutral*, *minimally helpful* and *not at all helpful*.

Table 7 shows that teachers most often expected to use what they learned in the PBS Reading Fluency class with a small group of students, one-on-one, and to help differentiate instruction. In contrast, most teachers did not expect to use what they had learned in conversations with school leaders or during school-wide staff meetings. The end of year data show that teachers’ projections were consistent with what actually happened, as the percentage of teachers who reported using the materials in various settings were generally similar to what the teacher had projected. It is also worth noting that no teachers indicated they had not used anything from the PBS class by the end of the study.

Table 7. Comparison of ways teachers most expected to use what they learned in PBS Reading Fluency Class to what they most frequently used

Responses*	Percent Post-course (n=30)	Percent Final-point (n=13)
With a small group of students	96.7%	100.0%
One-on-one with a student	83.3%	76.9%
To help differentiate instruction	76.7%	76.9%
In conversations with one other teacher	73.3%	61.5%
With a whole class of students	73.3%	69.2%
During a team meeting	56.7%	61.5%
In conversations with a school leader	36.7%	46.2%
During a school-wide staff meeting	26.7%	7.7%
I have not used anything from the PBS class	---	0.0%

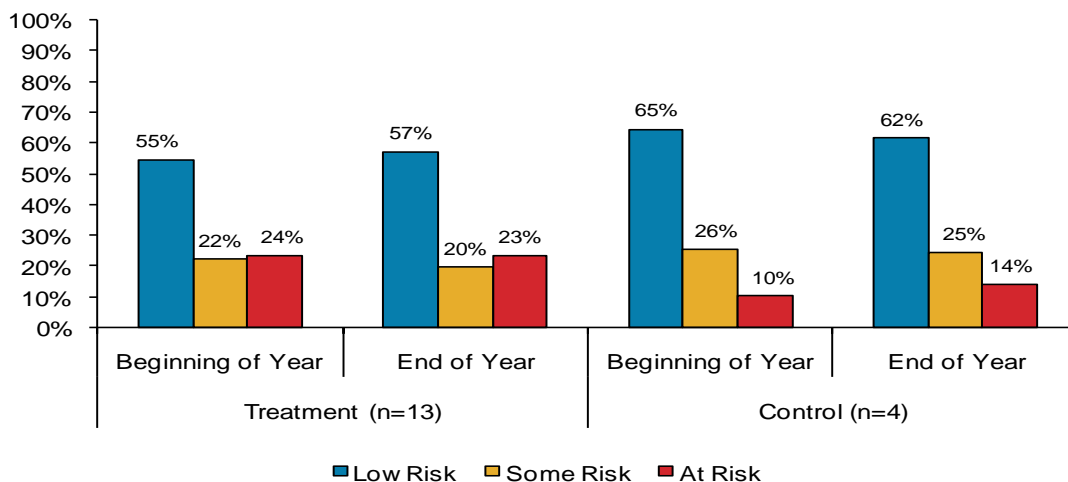
*Participants could choose multiple responses

G. JEFFERSON COUNTY CASE STUDY

In addition to administering the NAEP-scored ORF and the ERAS assessments, the Jefferson County (Colorado) school system also administered the DIBELS ORF assessment and shared the results for 17 teachers in the study. Of these 17 teachers, 13 were in the treatment group and four were in the control group. The DIBELS was administered at three times during the 2009-10 school year; however, the focus of our analysis is on the beginning and end of the school year.

Figure 14 shows the distribution of students across the three DIBELS ORF risk categories at the start and end of the school year for treatment and control classrooms. While there was a minor increase in the percentage of Low Risk students in the treatment classrooms (from 55% to 57%) and a similar decrease in the percentage of Low Risk students in the control classrooms (from 65% to 62%), the difference in the changes between the groups are neither substantial in magnitude nor statistically significant.

Figure 14. Mean percentage of students' DIBELS ORF scores by group



While this finding does not support the conclusion that we made based on the NAEP-scored data, we caution against placing too much weight on the Jefferson County results. First, the DIBELS data only includes 17 classrooms and just four control classrooms, which makes the comparison between the treatment and control very limited in its generalizability. Second, by only having access to the categories that students were placed in, and not their raw DIBELS score, we are not able to determine whether there was significant movement in student scores within categories. (e.g., a second grade student may have gone from a score of 0 – the low end of the At Risk category – to 68 – the high end of the At Risk category over the course of the year, which would indicate substantial growth in raw score but no change in category.)

H. LIMITATIONS

Four known limitations impacted data collection and analysis.

- While the teacher sample is geographically diverse and large enough to conduct statistical analysis, the sample size of 59 teachers limits the ability to detect effects of the program to some degree. Additional data collection from a larger and even more diverse teacher sample would make the findings of the study more generalizable.
- Survey administration issues led to inconsistencies in the presence and wording of some of the questions on the teacher survey across the study. As a result, we were not able to execute longitudinal analysis of all items on the teacher survey. Additionally, the Content Knowledge for Teaching Reading assessment was not administered immediately following the Reading Fluency course which prevented us from assessing the immediate effects of the program on teacher content knowledge.
- Because the data collection did not focus on compiling detailed information about teaching practices, we were not able to fully assess the impact of the course on teaching practices. Further data collection, such as classroom observations, would allow for additional questions about the effects of the course on teaching methods to be addressed.
- While the data show that the course impacted student ORF scores, the process through which the course affects student outcomes cannot be fully understood using the data collected for this study. The main hypothesis as to how the effects of the course would be transmitted to students – through increased teacher knowledge – was not supported by the data. Further data collection would be required to test alternative hypotheses.

CONCLUSIONS

The PBS TeacherLine Reading Fluency course was successful in achieving its goal to increase students' reading fluency ability. Exactly how the course translated from teachers to student remains unclear at this point, but we are confident that teacher participation in the PBS TeacherLine Reading Fluency Course had a positive effect on student ORF scores.

To understand the connections between the PBS TeacherLine Reading Fluency course and student outcomes, we can go back to the logic model presented in the methods section of this report. Student outcomes are hypothesized to be affected by three teacher variables that are in turn affected by participation in the TeacherLine program: pedagogical knowledge, self-efficacy, and teaching practices.

Pedagogical knowledge

This study alone did not provide us with enough evidence to confidently attribute treatment teachers' increased content knowledge scores to their participation in the PBS TeacherLine Reading Fluency Course. One possible reason for this finding is that the content knowledge assessment used in this study may not have measured the same type of reading knowledge covered in the PBS TeacherLine Reading fluency course. In future studies, we recommend considering the use of alternative content knowledge tests that may be better aligned with the specific content knowledge covered in the PBS TeacherLine reading fluency course.

Self-efficacy

The PBS TeacherLine Reading Fluency course was successful in increasing teachers' self-efficacy in teaching reading fluency immediately following the course; however, teachers' increased self-efficacy appears to have diminished over the course of the school year. Based on this finding, we recommend providing teachers with "refresher" courses or other supporting professional development opportunities in order to maintain and hopefully continue the growth of their self-efficacy.

Teaching practices

Based on data provided in this study alone, we do not have enough information to compare teachers' teaching practices pre- to post-course. In future studies we recommend placing more emphasis on teaching practices by conducting classroom observations or teacher interviews, in order to gain a solid measurement and understanding of teachers' teaching practices pre- and post-course.

Other factors

We found two moderating factors that influenced the impact of the PBS TeacherLine Reading Fluency course on student ORF scores. First, the impact of the course is significantly greater on second grade students than on third grade students. Second,

the impact of the course is significantly greater in classrooms with more experienced teachers (more than ten years) than in classrooms with less experienced teachers (ten years or less).

There may be other aspects of the PBS TeacherLine Reading Fluency Course, not measured by this study, that are influencing teachers and therefore students. We recommend examining the PBS TeacherLine course and identifying additional areas of interest and additional aspects of the course that may influence teachers and lead to improved student performance.

RECOMMENDATIONS

The following recommendations are based on the key findings presented in the findings and conclusions sections.

Continue to provide the PBS TeacherLine Reading Fluency course. The course increased teachers' self-efficacy and their students' ORF scores; it is evident that the course positively impacted teachers and students.

Provide teachers with periodic professional development throughout the year to sustain the increase self-efficacy. Results indicate that teachers who took the PBS TeacherLine Reading Fluency course had a significant increase in self-efficacy immediately following the course, but the effects faded throughout the year. Offering teachers periodic professional development or course refreshers throughout the year may lead to a sustained increase in self-efficacy.

Revisit the content knowledge measure in future studies. Data collected in this study indicates treatment teachers' content knowledge did not increase significantly more than control teachers' content knowledge. The content knowledge measure used in this evaluation may not capture the specific information taught in the PBS TeacherLine course. Consider creating a measure more closely aligned with specific content covered in course.

Consider additional measures. The process that links teacher participation and student performance is not fully understood; it is important to determine why and how the PBS TeacherLine course affects students ORF scores. Doing so will allow PBS to continue providing high quality professional development to teachers and will help PBS isolate specific features of the course that may be improved. For instance, because of the significance teaching experience had on student outcomes, we recommend paying particular attention, in future studies, to teaching experience, and its potential interaction with the impact of the course.

Place more focus on the measurement of teaching practices in future studies. Classroom observations or teacher interviews will allow an evaluator to gain a better understanding of teaching practices and how the PBS TeacherLine Reading Fluency course affects them. Teaching practices are of particular importance moving forward since students were positively impacted by the PBS TeacherLine course but the link connecting course content to student learning outcomes is unclear.

Appendices

Appendix A: PBS TeacherLine Course Syllabus

PBS TeacherLine Course Syllabus

Title

Teaching Reading Fluency (Grades 2-5)

Audience

This course is intended for pre-service and in-service teachers, grades 2-5, and those who are interested in helping older, struggling readers. The techniques included in this course are effective tools that educators can use to support students' development of reading fluency. The focus of this course is to provide learners with the time to engage with the theoretical and practical information about reading fluency and use the strategies to improve their own instruction.

Prerequisites

To successfully participate and complete the assignments in this course, the learner must have:

- Experience in working with students in grades 2 through 5 or in working with older, struggling readers;
- Access to at least two students in grades 2 through 5 or access at least two struggling readers in older grades in Sessions 2, 3, 4, and 5;
- Access to a device to record audio of students reading aloud (i.e., a traditional cassette-tape recorder, a digital audio recorder, a video camera with a microphone, or a computer with a microphone and a program such as *HyperStudio* or *PowerPoint*); and
- Access to a classroom in Session 5 (ONLY if the learner selects Assignment Option 1, "Fluency Observation Assignment.")

Course Description

In this course, learners will discover what reading fluency is and why it is an important part of the reading process. They will learn how to assess students' fluency using quantitative and qualitative techniques and they will learn and apply an array of practical, research-based techniques for helping students gain reading fluency both at school and at home. Learners will also explore how technology can be used to foster students' reading fluency. "Teaching Reading Fluency" is designed for teachers of second through fifth grades and those who are interested in helping older, struggling readers. Please note this course requires learners to interact with students. The content aligns with the NCTE Standards 1, 2, 3, 4, and 12, and both the content and delivery of the course align with many of the ISTE NETS.

Instructor/Facilitator

See instructor/facilitator sheet.

Credits

To be determined by college or university.

Goals

The goal of this course is to introduce important research about reading fluency instruction in second through fifth grades and lead learners through strategies for supporting students as they develop reading fluency.

By the end of the course, learners will be able to apply the following in their classrooms:

- The three dimensions of reading fluency: accuracy, automatic processing, and prosody;
- An understanding of how fluency instruction relates to students' comprehension;
- A broadened repertoire of research-based strategies to build fluency based on modeling and repetition;
- Knowledge of techniques that parents can use at home to encourage reading fluency in their child;
- Methods of assessing students' fluency; and
- A rubric-based technique for evaluating fluency instruction in the classroom.

Learner Outcomes (performance based)

Learners completing “Teaching Reading Fluency,” Grades 2-5 will be able to:

- Align their state’s standards to the NCTE/IRA standards and assess what the standards say, imply, or do not say about reading fluency.
- Assess students’ reading fluency by calculating words correct per minute, using fluency assessment scales, and then comparing the results to research-based norms.
- Use techniques for modeling fluency with students to improve their reading fluency.
- Develop a lesson that combines repeated reading with modeling, using the Oral Recitation Lesson (ORL) method.
- Evaluate the utility of technology-based approaches to fluency instruction.
- Create a fluency case study of a student or design a plan for a Fluency Fair for parents.

Outline of Content and Assignments

After previewing the documents in the Course Information, learners will proceed to the Course Content to complete the following six sessions, working through each session in order. Essential information pertaining to the topic is presented within each session. Throughout the sessions, learners are also asked to articulate their ideas in various forms; for example, they are encouraged to reflect on their ideas and experiences in their online journal. The weekly discussions in the discussion forum are designed to allow learners to glean information from other learners’ experiences with strategies both prior to and following the completion of the weekly assignments. As a final project, the learner will either develop a case study of a struggling reader or develop a plan for a Fluency Fair for parents.

This course is designed to address the National Council of Teachers of English (NCTE) and International Reading Association (IRA) *Standards for the English Language Arts* that were developed to serve as a guide for teachers in developing curriculum and instruction that foster students’ literacy development. The course specifically addresses Standards 1, 2, 3, 4, and 12. In Session 1 of this course, learners will read the applicable NCTE/IRA standards and familiarize themselves with how their own states’ standards present reading fluency.

Additionally, this course addresses several of the ISTE NETS*T for teachers including the following:

- Identify and locate technology resources and evaluate them for accuracy and suitability.
- Apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice.
- Use technology to increase productivity and communicate with peers and parents.

Session 1: Understanding Reading Fluency

By the end of this session, the learner will be able to:

- Define his or her professional goals and expectations for this course in the online journal.
- Explain his or her prior knowledge and experiences about teaching reading fluency in the online journal.
- Identify and analyze the potential causes of fluency difficulties.
- Evaluate and compare NCTE/IRA standards and his or her state's standards related to fluency.

Read

- "Key Areas of Instruction: Fluency"
- "Fluency Instruction" an excerpt, from *Put Reading First*
- "An Interview With Edward Kame'enui"
- NCTE/IRA Standards

Additional Resources (not required)

- A Focus on Fluency
- Between the Lions Teacher's Handbook

Write in Online Journal

- Reflect on expectations for the course.
- Reflect on prior experiences of developing students' reading fluency and any techniques that were used.

Participate in an Online Discussion

- Introduce themselves to other learners.
- Read a scenario and respond to: When students lack fluency, what are the potential causes?

Can fluency always be improved through instruction?

View the videos

- "Fluency (Haley)", "Fluency (Ryan)", and "Fluency (Starr)."

Complete Assignment

- Align state standards to NCTE/IRA standards, noting the similarities and differences. Post analysis to the Standards Gallery in the discussion forum.

Session 2: Assessing Fluency

By the end of this session, the learner will be able to:

- Calculate a student's reading rate in words correct per minute (wcpm).
- Compare students' reading rate in words correct per minute to research-based norms for reading rate.
- Discuss the implementation of fluency scales in the classroom.
- Analyze and compare fluency assessment scales.
- Evaluate two students' fluency using the Multidimensional Fluency Scale or the NAEP Fluency Scale.

Read

- "Procedure for Calculating Words Correct Per Minute" from the report, *Put Reading First*
- "Assessing Reading Fluency"
- "Assessing Word Recognition and Fluency Through Oral Reading" from the book, *Building*

Fluency: Lessons and Strategies for Reading Success

Review

- The Using Fluency Scales Rubric with the Fluency Scales Assignment

Write in Online Journal

- Reflect on which of the fluency scales better reflects what you have learned about fluency? Which of the scales are you most interested in trying out and why.

Participate in an Online Discussion

- Read a scenario and respond to: In what ways can teachers use assessments of students' reading fluency in the classroom?

Complete Activities and Assignments

- Complete the "Calculating Reading-Rate" assignment.
- Complete the "Using Fluency Scales" assignment.

Session 3: Fostering Fluency through Modeling

By the end of this session, the learner will be able to:

- Identify new ways in which fluency instruction based on modeling can be incorporated into his or her current or future reading curriculum.
- Justify the effectiveness of Cross-Age Reading to foster fluency through modeling.
- Evaluate a reading fluency technique based on modeling.

Read

- “Read Aloud” from the book, *The Fluent Reader*
- “Model Fluent Reading” from the book, *Building Fluency: Lessons and Strategies for Reading*

Success

- “Paired Reading” from the book, *The Fluent Reader*
- “Recorded Readings” from the book, *The Fluent Reader*

Additional Resources (not required)

Between the Lions: Fuzzy Lion Ears

<http://pbskids.org/lions/games/ears.html>

Between the Lions: Gawain’s Word

<http://pbskids.org/lions/games/gawain.html>

Between the Lions: Pounce

<http://pbskids.org/lions/games/pounce.html>

Between the Lions: Songs

<http://pbskids.org/lions/songs/>

Between the Lions: Stories

<http://pbskids.org/lions/stories.html>

Between the Lions: Think and Sink

<http://pbskids.org/cgi-registry/lions/think.pl/games>

Between the Lions: Word Play

<http://pbskids.org/lions/games/wordplay.html>

Book Finder

<http://www.pbs.org/parents/bookfinder/>

Clifford: Puppy Letters

http://pbskids.org/clifford/games/index_puppyletters.html

Clifford: Stories

<http://pbskids.org/clifford/stories/index.html>

Dragon Tales: Dragon Games

http://pbskids.org/dragontales/sticker_story/sticker.html

Dragon Tales: Search for Mami

<http://pbskids.org/dragontales/storybook/storybook.html>

Hoskisson, K. (1975). Successive approximation and beginning reading. *Elementary School Journal*, 75(7), 442-451.

Hoskisson, K., & Krohm, B. (1974). Reading by immersion: Assisted reading. *Elementary English*, 51(6), 832-836.

Helping the Underachiever in Reading. Retrieved 2/16/06 from

http://www.pbs.org/launchingreaders/readingrocks/helpfularticles_3.html

It’s a Big Big World: Interactive Stories

<http://pbskids.org/bigbigworld/home.html?externalPuppet=madge&externalAddRoom=none&action=interactive>

Reading Rainbow: Silly Sentence Machine

http://pbskids.org/readingrainbow/bookem/silly_sentence.html

Reading Milestones

http://www.pbs.org/parents/readinglanguage/second/reading_milestone_second.html

Recordings for the Blind and Dyslexic

<http://www.rfbd.org/membership.htm>

Sharing Poetry

<http://www.pbs.org/parents/readinglanguage/articles/poetry/main.html>

Write in Online Journal

Reflect on the opportunities for modeling fluent reading in the classroom, including how it could be done more frequently and how to provide English Language Learners and older, struggling readers with models of fluent reading.

Participate in an Online Discussion

Read a scenario and respond to: What arguments and evidence can you present to a parent who thinks that Cross-Age Reading is a waste of time?

View the video vignette

“Anna,” featuring a fourth-grade student reading with a kindergarten “partner.”

Complete Assignment

Complete “Modeling Fluency”.

Session 4: Building Fluency through Repetition

By the end of this session, the learner will be able to:

- Identify ways to modify Repeated Readings for his or her classroom.
- Design an Oral Recitation Lesson (ORL).
- Discuss the effectiveness of the ORL.
- Explain how he or she would use Reader’s Theater to meet the needs of students.

Read

- “Repeated Reading” from the book, *The Fluent Reader*
- “Be a Good Detective: Solve the Case of Oral Reading Fluency” from, *The Reading Teacher*
- “Implementing ORL” from the book, *The Fluent Reader*

Additional Resources (not required)

Aaron Shepard’s Reader’s Theater

<http://www.aaronshp.com/rt/>

Reading Rockets’ Find a Book

<http://www.readingrockets.org/books/findabook.php>

“English Language Learners and the Five Essential Components of Reading Instruction”

<http://www.readingrockets.org/articles/341>

Heroes and Hope – Anthem Sing Along

http://pbskids.org/readingrainbow/heroes_and_hope/anthem.html

Make Your Own Book

http://pbskids.org/readingrainbow/bookem/make_your_own_book.html

“PBS Parents Student/Parent Book Club”

<http://www.pbs.org/parents/readinglanguage/articles/bookclubs/main.html>

Reading Rockets

<http://www.readingrockets.org>

Reading Rockets’ Find a Book

<http://www.readingrockets.org/books/findabook.php>

Write in Online Journal

- Reflect on how to use Reader’s Theater to meet the needs of diverse students in the classroom.

Participate in an Online Discussion

• Respond to: Based on your experiences using the “Repeated Reading” interactive with your “focus students” (and on any other Repeated Readings experience you have), in what ways do you find Repeated Readings useful? What advice might you give to colleagues about using the Repeated Readings technique? Do you see any drawbacks to this technique? Have you found any ways to compensate for them?

View the video

- “Reader’s Theater (Part 1)”
- “Reader’s Theater (Part 2),” featuring third-graders engaged in Reader’s Theater.

Explore the Interactive

- “Repeated Reading I interactive with two students.

Complete the Assignment

- Complete “Oral Recitation Lesson”.

Session 5: Comprehensive Approaches to Building Fluency

By the end of this session, the learner will be able to:

- Evaluate the quality of fluency instruction in one classroom using a rubric.

OR

- Explain to parents the importance of the “reading at home” component of Fluency-Oriented Reading Instruction (FORI) and how it can be implemented.
- Discuss his or her observations about fluency instruction and explain how these relate to the information presented in the course.
- Evaluate the utility of technology-based approaches to fluency instruction.

Read

- “Fluency Instruction Rubric” from the tool, *Literacy Instruction Rating Scale*
- “Directions for Using the Fluency Instruction Rubric” from the tool, *Literacy Instruction Rating Scale*

Scale

• “Fluency-Oriented Reading Instruction” from the research article, *Fluency-Oriented Reading Instruction*

- *Fluent Reading*. Retrieved 2/16/06 from

<http://www.pbs.org/launchingreaders/fluentreading/overview.html>

- “Technology and the Building Blocks for Teaching Students to Read: Fluency” from the report,

Technology and Teaching Children to Read

Additional Resources (not required)

- Soliloquy Learning: Reading Research and Science •
http://www.soliloquylearning.com/research_paper.html
- Technology and Teaching Children to Read
http://www.neirtec.org/reading_report/
- A Focus on Fluency
<http://www.prel.org/programs/rel/fluency.asp>

Write in Online Journal

• Reflect on the advantages—if any—that technology offers over more traditional methods of helping students increase their reading fluency, and strategies for incorporating fluency-related technology into daily instruction.

Participate in an Online Discussion •

Respond to: How did your observations of a classroom using the Fluency Instruction rubric compare to that which you have learned about fluency instruction in this course?

View the video

• “Reading Assistant,” to see a student using software that is designed to improve her reading fluency.

Explore the interactive

- “Repeated Reading II” with two students.

Complete Activity and Assignment

Complete the Assignment

- Complete the “Fluency Observation” assignment students.

OR

- Complete the “FORI Letter” activity.

Session 6: Implementing Fluency Approaches

By the end of this session, the learner will be able to:

- Assess his or her learning in this course by comparing his or her prior knowledge and acquired knowledge.
- Analyze the learning experience in this course by reflecting about his or her professional goals and expectations.
- Create a fluency case study about one of his or her “focus students
- Design a plan for a Fluency Fair that informs parents in his or her school about fluency.

Read

- Responses
<http://www.pbs.org/wgbh/misunderstoodminds/readingstrats.html>
- NCTE/IRA Standards
<http://www.ncte.org/about/over/standards/110846.htm>
- ISTE NETS
http://cnets.iste.org/students/s_stands.html

Additional Resources

- “The Case Method in Teacher Education: Alaskan Models” • <http://www.ericdigests.org/pre-9217/method.htm>

Final Project

Learners will submit their choice of two final projects in Session 6. The two options are:

Option 1: Fluency Case Study

1. Case study paper with the following sections:
 - Background information
 - Assessment Results and Analysis
 - Student Response to Modeling
 - Student Response to Interactives
 - Plan for Future Instruction
2. Post case study to the Case Study Gallery and provide feedback to least two other learners

Option 2: Fluency Fair Plan

1. One-page Fair Plan, aligned to the NCTE/IRA and state standards, and ISTE NETS
2. 2-4 handouts for parents
3. Post Fair Plan to the Fluency Fair Gallery and provide feedback to at least two other learners
4. One-page rationale for plan

Schedule

It will take about 30 hours to complete this course. Each session should take approximately 4-5 hours. If you find yourself spending several hours more than this in any given session, please contact your facilitator to make sure this is necessary to complete the given assignments.

Requirements

Learners are expected to:

- Complete all assignments.
- Maintain an online journal.
- Participate and actively engage in discussions with fellow learners while contributing to the social construction of knowledge.
- Be self-directed and self-motivated.
- Ask for assistance when they need it.

Materials (hardware, software, plug-ins)

Technical Requirements

- Word processor
- Internet service provider
- E-mail

Academic Dishonesty Policy

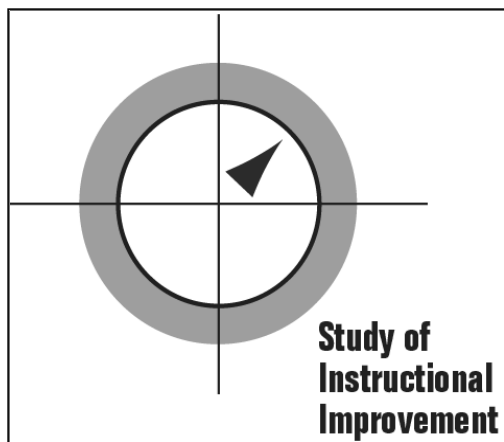
To be inserted by university institution only

Evaluation

This course can be taken for graduate credit on a pass/fail basis, or for a letter grade and graduate credit. See graduate credit details pertaining to specific graduate credit institutions.

Last Update April 26, 2006

Appendix B: Content Knowledge for Teaching Reading



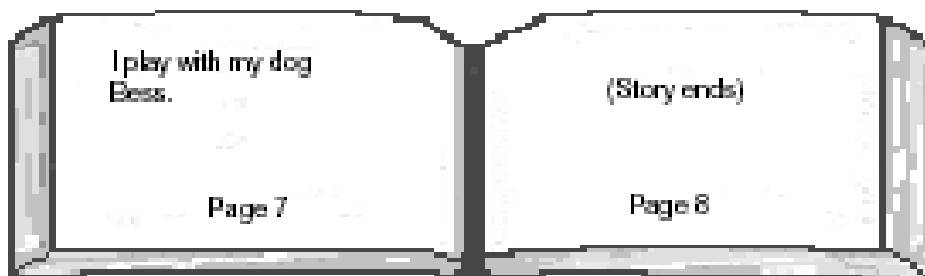
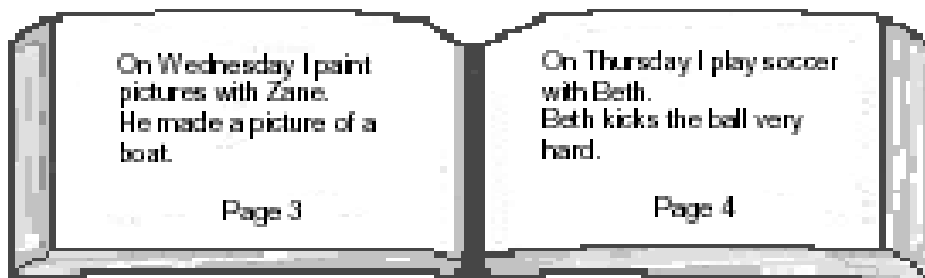
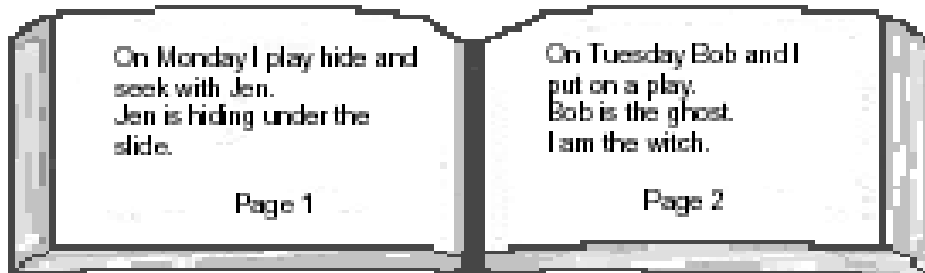
CONTENT KNOWLEDGE FOR TEACHING READING

Instructional measures copyright 2002, Study of Instructional Improvement (SII)/Consortium for Policy Research in Education (CPRE). Not for reproduction or use without written consent of SII. Measures development supported by NSF grant REC-9979873, by a subcontract to CPRE on Department of Education (DOE), Office of Educational Research and Improvement (OERI) award #R308A960003, by University of California Office of the President award #8047PCE186, and by the Atlantic Philanthropies.

1. A teacher named Mr. Rink asked an aide to present each of the following words orally to a group of children and to have the children tell the aide how many phonemes (speech sounds) are in each word. Please create an answer key that Mr. Rink's aide could use by circling the number of phonemes contained in each word.

	0	1	2	3	4	5	I'm not sure
battle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
exit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
terse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The next question is about a children's book called *A Friend for a Day*. The text of the book is displayed below. In the book, each passage is accompanied by an illustration, but the illustrations are not included here due to space limitations. Please read the book below and answer the questions on the following pages.



2. Ms. Andrews has just finished reading “A Friend For A Day” with her students. She is now considering a number of questions she might use to carry out a discussion of the story. Ms. Andrews wants students to work on understanding details that are central to understanding the story. She also wants students to make inferences based on the information in the story. Which questions would you select for each of these purposes? (Mark an “X” each item)

	Identify <u>central</u> details	Make inferences	Neither	I'm not sure
Where does Jen hide?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What do you like to do with your friends?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What other kinds of things do you think the main character would like to do?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Bess a child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Robert, a second-grade student, makes many substitutions for words while oral reading. His errors seem to preserve the meaning of text. His teacher is concerned that Robert might be reading texts that are too difficult. She checks the number of errors he is making and decides that the text he is reading is actually appropriate for Robert's instruction.

Which of the following instructional approaches are likely to help Robert notice or correct these substitutions? (Mark YES, NO, or I'M NOT SURE for each approach.)

	Yes	No	I'm not sure
Before he reads, remind Robert to use context to determine words.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage Robert to substitute easier words for challenging ones in order to maintain reading fluency and understanding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Before he reads, have Robert predict words that he might find in the text.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage Robert to attend carefully to meaning elements in words (e.g., beginnings, roots, common endings) when encountering a challenging word.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Mr. Sloan writes the following sentences on the board:

*John and Mary were worried about the cost. The operation was expensive.
They called their Uncle William.*

Mr. Sloan then asks students to work independently to write what these three sentences might be about. Louis responds that this is a story about an expensive operation. When pressed by Mr. Sloan to say more, Louis adds, “The operation was expensive.” Mr. Sloan asks Louis to reread and then asks him again what the three sentences might be about. Louis responds, “It is about John and Mary and they were worried. They called their Uncle William.” Based on this answer, which of the following might Louis quite possibly need help with? (Mark YES, NO, or I’M NOT SURE for each choice.)

	Yes	No	I’m not sure
Increasing his sight-word vocabulary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paying attention to details in the text	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Answering literal or factual questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning to integrate information across text	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning to decode complicated words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Ms. Dilley’s fifth-grade class is reading about the explorations of Lewis and Clark. The word “portage” appears in a story that they are reading, and several children do not know what this word means. Ms. Dilley has been trying to help her students look at the structure of words to examine their “meaning elements.” Which of the following options are examples of taking this approach with the word “portage?” (Mark YES, NO, or I’M NOT SURE for each choice.)

	Yes	No	I’m not sure
Have the children look up “portage” in the glossary at the back of their textbook.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assign the children a crossword puzzle that uses “portage” and other vocabulary related to the Lewis and Clark explorations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create a word-family map with words using “port” as a root, such as “import,” “export,” and “portable.”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ask students to use the word in a sentence they create.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Mr. Stier is using the following text to determine which of his students can evaluate an author’s perspective and the evidence the author uses to support that perspective. Mr. Stier refers to this skill as “critical reading.”

The Civil War was fought from 1861 to 1865. The Northern states fought against a collection of 11 states, mainly in the Southern United States. According to most authors, the Civil War was fought to earn freedom for African-American slaves in the Southern United States. But the Civil War was really fought to preserve the sovereignty of states over the national government. While issues such as slavery may have accelerated the conflict, the states’ rights issue would have surfaced eventually. Even if slavery had not existed as an issue, the North and South would have eventually gone to war.

The teacher’s guide includes a few questions a teacher might ask about this passage. Which of these questions could Mr. Stier choose to assess his students’ ability to read critically? (Mark YES, NO, or I’M NOT SURE for each choice.)

	Yes	No	I’m not sure
During what years was the Civil War fought?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
According to most authors, why was the Civil War fought?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Where did African-American slaves work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What attitude toward the Civil War does the author of this text want you to take?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you agree with the author? Why or why not?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Ms. Marshal is concerned about Lonny’s spelling. She collects samples of misspelled words from his writing journal and shows them to Ms. Finley. She wants to figure out which sounds Lonny is confusing so she can help him hear and write these sounds. As the two teachers examine the words, they notice three major areas of confusion: voiced and voiceless consonant pairs, consonant blends, and short vowels. Which, if any, of these three types of confusion is suggested by the spelling errors in each of the following words? (Mark ONE option for each word.)

	Voiced and voiceless consonants	Consonant blends	Short vowels	None of these	I’m not sure
MAT for mad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PAY for play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PED for bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BAEK for bake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BAST for best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Mrs. Jones, a third-grade teacher, has just completed an informal assessment of her students' speed and accuracy in word recognition. She determines that three students are accurate in sounding out words but slow at reading text. This result is confirmed in a one-minute timed reading passage, on which all three students read less than 60 words per minute in grade-appropriate material. To help these students increase their reading fluency, what should Mrs. Jones do? (Mark YES, NO, or I'M NOT SURE for each choice.)

	Yes	No	I'm not sure
Engage the students in repeated readings of easy text passages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teach the students which parts of a passage to skip, so that they can keep pace with their classmates.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read aloud to the students more frequently to increase interest and exposure to literature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide the student with high-interest library books and freedom to choose and read books of personal interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Ms. Thomas recently attended a professional seminar in which the facilitator discussed important considerations for instruction of “sight words.” He referred to these as the high-frequency words students encounter most often in their reading. In addition, the facilitator noted that these words are not spelled regularly and are therefore not easy for students to sound out by using common phonics rules.

Ms. Thomas offers to generate a list of these so-called “sight words” with the goal of finding words that are both high frequency and irregularly spelled. For each word below, consider whether it is high frequency and consider whether it is irregularly spelled.

Part a. Mark (X) for each word.

	High frequency	Low frequency	I’m not sure
said	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
was	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part b. Mark (X) for each word.

	Irregularly spelled	Regularly spelled	I’m not sure
said	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
was	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THE PARTRIDGE AND THE FOWLER

A Fowler caught a Partridge and was about to kill it. The Partridge earnestly begged him to spare his life, saying, "Pray, master, permit me to live and I will entice many Partridges to you in recompense for your mercy to me." The Fowler replied, "I shall now with less scruple take your life, because you are willing to save it at the cost of betraying your friends and relations."

10. To assess his students' understanding of *The Partridge and the Fowler*, Mr. Hamada asks them to work in small groups to select a moral for this fable. He provides a list of possible morals. Which choices capture the meaning of this fable? (Mark YES, NO, or I'M NOT SURE for each choice.)

	Yes	No	I'm not sure
Birds of a feather flock together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One can not escape one's own evil deeds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The gods help those that help themselves.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The hero is brave in deeds as well as words.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix C: Teacher Survey (Final-Point)

Teacher Survey April 2010

We appreciate your participation in the PBS TeacherLine online course and research on reading fluency. The questions in this survey are about your teaching beliefs and practices.

Please enter the information below to enable us to track your participation in this study. The answers you provide will remain anonymous, and the results will only be reported in the aggregate.

First name: _____

Last name: _____

Which group are you in?

- Treatment (completed PBS online course on Reading Fluency in Spring 2009)
- Control (did NOT complete PBS online course on Reading Fluency in Spring 2009)

[For treatment teachers only]: In what way(s) have you most frequently used what you learned in the PBS Reading Fluency class? (check all that apply)

- In conversations with one other teacher
- During a team meeting
- During a school-wide staff meeting
- In conversations with a school leader
- With a whole class of students
- With a small group of students
- One-on-one with a student
- To help differentiate instruction
- I have not used anything from the PBS Reading Fluency class

1. Are you currently involved in any of the following (check all that apply)?

- A professional learning community
- A coaching program
- A mentoring program
- Other professional development (please specify): _____

2. Please indicate the grade level(s) that you teach this year (choose up to two grades):

- Kindergarten
- First Grade
- Second Grade
- Third Grade
- Fourth Grade

3. What grade level did you teach last year (choose up to two grades)?

- Kindergarten
- First Grade
- Second Grade
- Third Grade
- Fourth Grade
- Fifth Grade
- Sixth Grade
- Seventh Grade
- Eighth Grade
- Ninth Grade
- Tenth Grade
- Eleventh Grade
- Twelfth Grade
- Other: _____

4. How would you rate your comfort level with using the internet or online technology?

- Not at all comfortable
- A little comfortable
- Somewhat comfortable
- Pretty comfortable
- Very comfortable

5. Please indicate the reading *Risk Level* you feel the majority of your students this year are currently performing at.

- At Risk
- Low Risk
- Some Risk

6. Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A great deal" as each represents a degree on the continuum.

	1 (None at all)	2	3 (Very little)	4	5 (Some degree)	6	7 (Quite a bit)	8	9 (A great deal)
a. How much can you do to get students to believe they can do well in reading?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. How well can you know how much progress each student makes in reading fluency over time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. How much can you do to motivate students who show low interest in reading?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. How well can you teach different types of learners to read fluently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. To what extent can you help the most struggling readers to read fluently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. To what extent can you help English language learners to read fluently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. How well can you get all students in your class to read fluently?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. To what extent can you use a variety of reading assessment strategies?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. To what extent do you feel you have sufficient time and resources to improve the reading fluency of your students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. How much can you assist families in helping children improve reading fluency?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. This year, how many students do you deliver reading fluency instruction to? _____
8. This year, how many students in your class are English Language Learners (ELL)? _____
9. This year, how many students in your classroom receive supplemental instruction, intensive intervention, or remediation services in reading or English Language Arts? _____
10. How often do you focus on reading fluency instruction in your teaching?
- Daily
 - 2-4 times per week
 - Once per week
 - 2-3 times per month
 - Monthly
 - Less than monthly
 - Never
11. Please rate your ability to teach reading fluency:
- Weak
 - Fair
 - Good
 - Excellent
12. Which of the following techniques do you regularly use as part of your teaching practice (check all that apply)?
- Modeling
 - Repeated reading
 - Oral recitation
 - Choral recitation
 - Communicating about or teaching techniques to parents
 - Assessing reading fluency of students
 - Using assessment scores or data to inform my reading instruction
 - Using technology or software to teach reading fluency
 - I use another technique
 - I do not use any techniques to teach reading fluency
 - I would like to share some additional techniques or arrangements in my classroom to teach reading fluency: _____

13. How comfortable would you feel explaining the following concepts to a colleague?

	Very uncomfortable	Uncomfortable	Comfortable	Very comfortable
a. The three dimensions of reading fluency: accuracy, automatic procession and prosody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. How reading fluency related to students' comprehension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Aligning reading fluency instruction to state standards and the NCTE/IRA standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Ideas and techniques which parents can use at home to encourage reading fluency in their child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Technology-based approaches to teaching reading fluency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Rubric-based techniques for evaluating fluency instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Please indicate your level of agreement with each of the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I am comfortable using research based strategies to build fluency skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I am likely to develop a lesson plan that combines repeated reading with modeling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have an expansive range of reading fluency assessment techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I am comfortable using assessment scores or data to inform my reading instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Please indicate whether each of the following reading fluency related statements is true or false:

	True	False
a. When fluent readers read silently, they recognize words automatically.	<input type="radio"/>	<input type="radio"/>
b. Fluency is important because it provides a bridge between word recognition and comprehension.	<input type="radio"/>	<input type="radio"/>
c. Research shows that instructional time spent on silent, independent reading with minimal guidance and feedback improves reading fluency and overall reading achievement.	<input type="radio"/>	<input type="radio"/>
d. Repeated and monitored oral reading is an effective teacher practice.	<input type="radio"/>	<input type="radio"/>
e. It is a good idea to provide students with models of fluent reading.		

16. How frequently do you use the following technologies?

	Several times a day	Once a day	Several times a week	Once a week	Monthly	Less than monthly
a. Send/receive email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Use online discussion boards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Search the internet for professional resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. View video or audio clips on the computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Download professional resources from the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Social network(s) i.e. Tapped in, The Face book, My e-coach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. What is your comfort level using the following technologies?

	Very uncomfortable	Uncomfortable	Comfortable	Very comfortable
a. Sending/receiving email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Sending/receiving attachments through email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Using online discussion boards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Writing online blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Searching the internet for professional resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Downloading resources from the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Social network(s) i.e. Tapped in, The Face book, My e-coach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

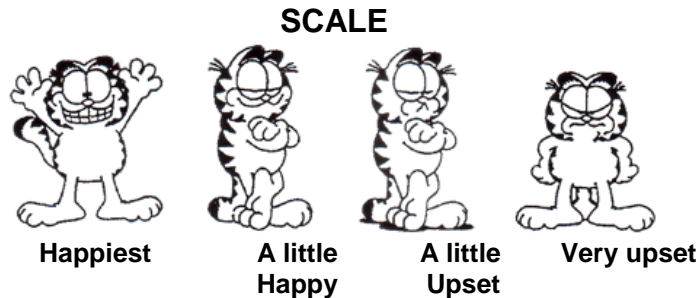
18. At this point, how satisfied are you with each of the following aspects of teaching at this school?

	Very unsatisfied	Unsatisfied	Slightly satisfied	Satisfied	Very Satisfied
a. Availability of reading materials in your classroom (books, reading series, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Availability of reading materials throughout the entire school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Quality of reading materials available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Access to professional development resources (classes, workshops, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Availability of equipment in the school (overhead projectors, computers, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Autonomy or control over your own classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Student motivation to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Student discipline and behavior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Opportunities for professional development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Principal, teachers and staff collaboration to make school run effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Teachers at this school make a conscious effort to coordinate their teaching with instruction at other grade levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix D: Elementary Reading Attitude Survey

Elementary Reading Attitude Survey (ERAS) Directions for Use

The Elementary Reading Attitude Survey provides a quick indication of student attitudes toward reading. It consists of 20 items and can be administered to an entire classroom in about 10 minutes. Each item presents a brief, simply worded statement about reading, followed by four pictures of Garfield. Each pose is designed to depict a different emotional state, ranging from very positive to very negative.



Administration

Begin by telling students that you wish to find out how they feel about reading. Emphasize that this is *not* a test and that there are no “right” answers. Encourage sincerity.

Distribute the survey forms and ensure that students write their names in the space at the top. Hold up a copy of the survey so that the students can see the first page. Point to the picture of Garfield at the far left of the first item, ask the students to look at this same picture on their own survey form. Discuss with them the mood Garfield seems to be in (*very happy*). Then move to the next picture and again discuss Garfield’s mood (this time, *a little happy*). In the same way, move to the third and fourth pictures and talk about Garfield’s moods—*a little upset* and *very upset*. It is helpful to point out the position of Garfield’s *mouth*, especially in the middle two figures.

Explain that, together, you will read some statements about reading and that the students should think about how they feel about each statement. They should then **fill in the bubble below** the Garfield that is closest to their own feelings. (Emphasize that the students should respond according to their own feelings, not as Garfield might respond)! Read each item aloud slowly and distinctly, and then read it a second time while students are thinking. Be sure to read the item *number* and to remind students of page numbers when new pages are reached.

ID# _____

Elementary Reading Attitude Survey

Teachers Name: _____

Grade Level: _____ Gender: _____ Date: _____

Scale



Happiest



A little
Happy



A little
Upset



Very upset

Please fill in bubbles completely to mark your answer

Correct	Incorrect
<input type="radio"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

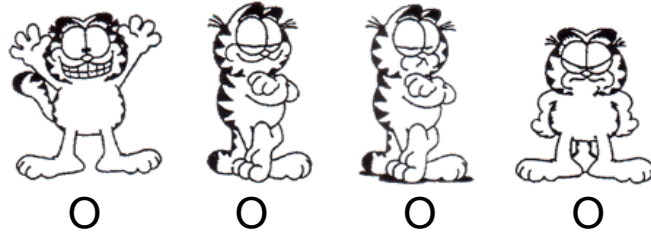
1. How do you feel when you read a book on a rainy Saturday?



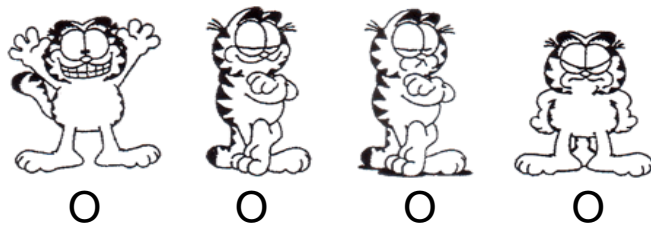
2. How do you feel when you read a book in school during free time?



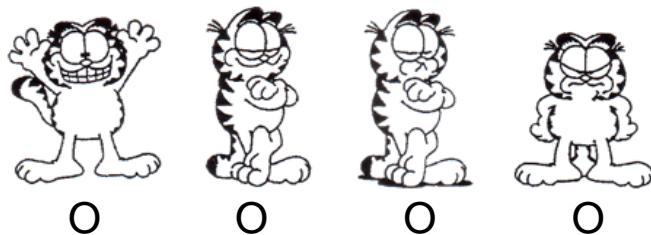
3. How do you feel about reading for fun at home?



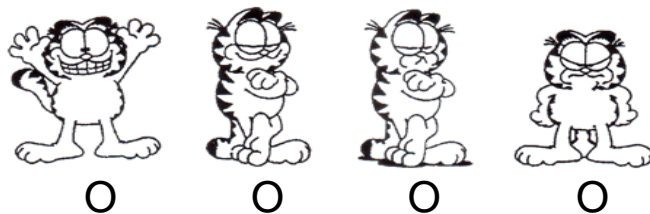
4. How do you feel about getting a book for a present?



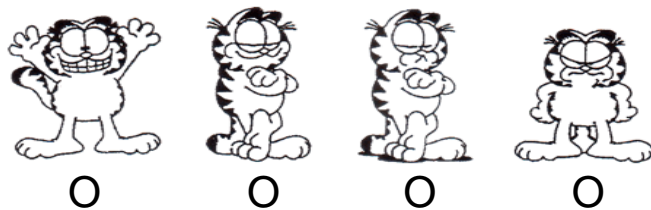
5. How do you feel about spending free time reading?



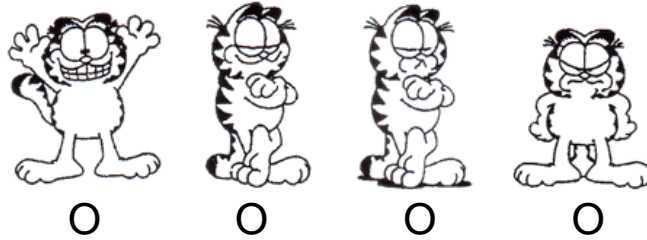
6. How do you feel about starting a new book?



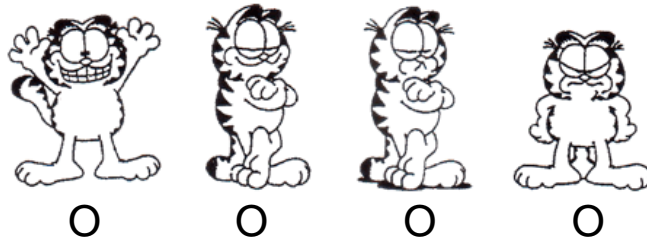
7. How do you feel about reading during summer vacation?



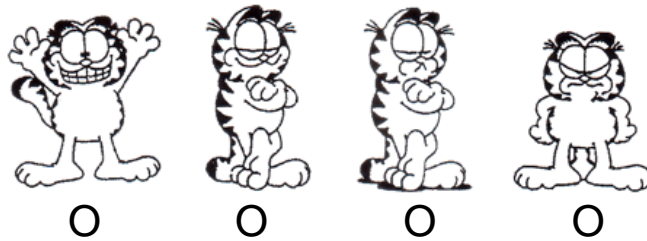
8. How do you feel about reading instead of playing?



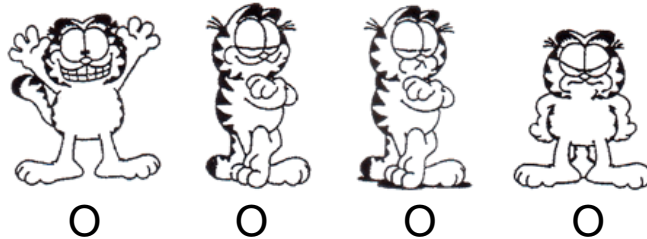
9. How do you feel about going to a bookstore?



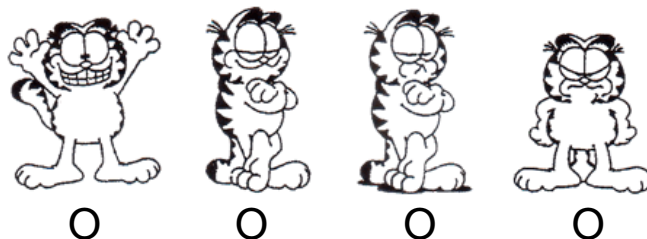
10. How do you feel about reading different kinds of books?



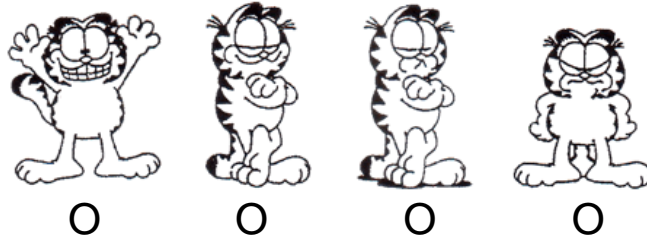
11. How do you feel when the teacher asks you questions about what you read?



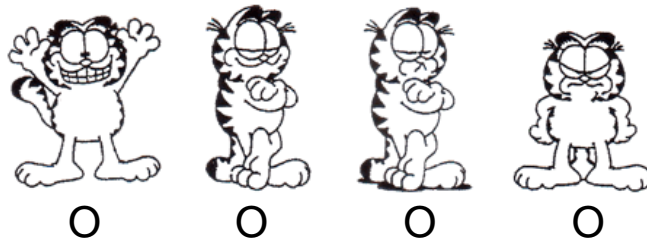
12. How do you feel about doing reading workbook pages and worksheets?



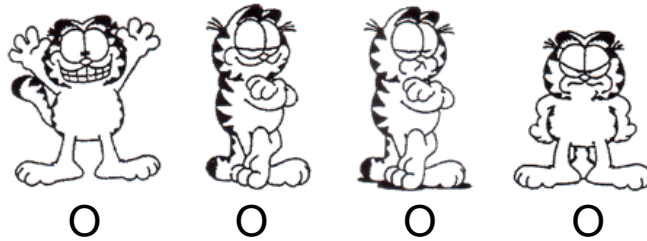
13. How do you feel about reading in school?



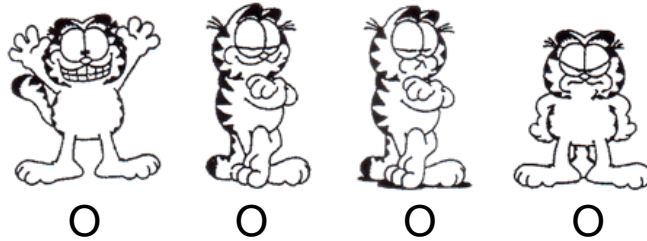
14. How do you feel about reading your school books?



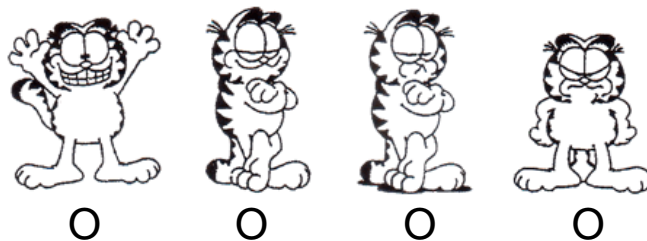
15. How do you feel about learning from a book?



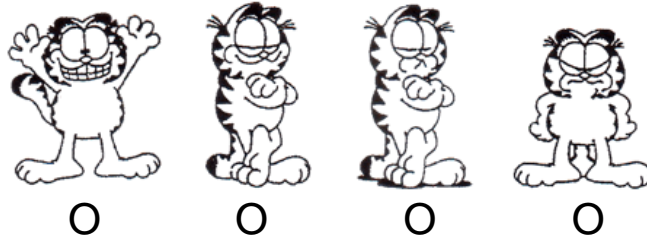
16. How do you feel when it is time for reading in class?



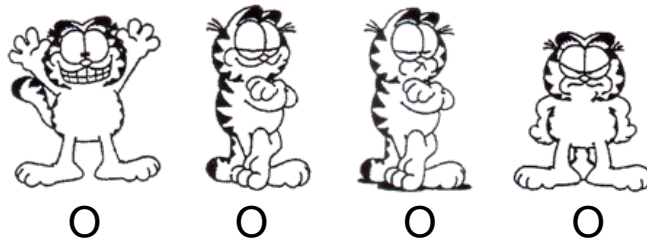
17. How do you feel about the stories you read in reading class?



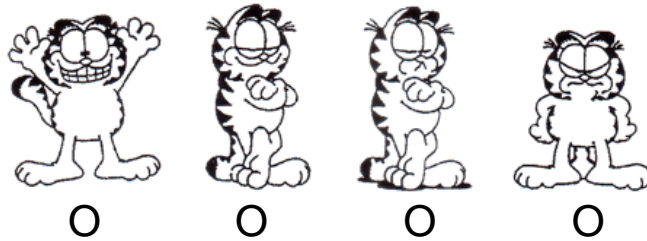
18. How do you feel when you read out loud in class?



19. How do you feel about using a dictionary?



20. How do you feel about taking a reading test?



GARFIELD: © 1978 United Feature Syndicate, Inc. Kear, D.J. & McKenna, M. C. (1999). Measuring attitude toward reading: A new tool for teachers. In S. J. Barrentine (Ed.), *Reading assessment: principles and practices for elementary teachers. A collection of articles from "The Reading Teacher."* p. 199-214. Newark, DE: International Reading Association. Garfield Images approved for use in this document only.

Appendix E: NAEP Oral Reading Fluency Scale Assessment

NAEP's Oral Reading Fluency Scale Assessment

The Oral reading fluency assessment (ORF) is an individually administered test of accuracy and fluency. For the purposes of this study we will rely on the ORF to monitor progress toward instructional goals.

Please provide a private, quiet place to administer the assessment. Administer the assessment to each student individually. You will ask each student to read aloud for one minute.

STANDARDIZED DIRECTIONS - Oral reading fluency assessment

1. Place the NAEP assessment scale in front of you. As you listen to each student read, use the NAEP scale to determine the student's fluency level.
2. Place the text you have selected in front of you. Please select reading material that is at the student's "Just Right" or "On the Easy Side" reading level. If the student misses more than 1 word in 15 or 20 words, select easier material
3. Place the student's copy of the text in front of the student.
4. Say these specific directions to the student:
Please read this (point) out loud. If you get stuck, I will tell you the word so you can keep reading. Do your best reading. Start here (point to the first word of the passage). Begin.
5. Start your stopwatch when the student says the first word of the passage (the title is not counted).
6. At the end of 1 minute, stop child from reading.
7. On the attached data recording sheet, bubble in the student's fluency level (scale of 1-4), along with their assigned ID number.

NAEP's Oral Reading Fluency Scale

Level 4

- ◆ Reads primarily in larger, meaningful phrase groups.
 - ◆ Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story.
 - ◆ Preservation of the author's syntax is consistent.
 - ◆ Some or most of the story is read with expressive interpretation.
-
-

Level 3

- ◆ Reads primarily in three- or four-word phrase groups.
 - ◆ Some smaller groupings may be present.
 - ◆ Majority of phrasing seems appropriate and preserves the syntax of the author.
 - ◆ Little or no expressive interpretation is present.
-
-

Level 2

- ◆ Reads primarily in two-word phrases with some three- or four-word groupings.
 - ◆ Some word-by-word reading may be present.
 - ◆ Word groupings may seem awkward and unrelated to larger context of sentence or passage.
-
-

Level 1

- ◆ Reads primarily word-by-word.
 - ◆ Occasional two-word or three-word phrases may occur-but these are infrequent and/or they do not preserve meaningful syntax.
-

Source: U.S. Department of Education, National Center for Education Statistics. *Listening to Children Read Aloud*, 15. Washington, DC: 1995.

Appendix F: Additional Demographic Information

Table F-1. Participating teachers by district (n=59)

Participating Districts	Frequency (n-value)	Percent	State
Adams County School district	3	5%	CO
Anne Arundel County Public Schools	5	8%	MD
Clark County School District	17	29%	NV
Flagstaff Unified	3	5%	AZ
Jefferson County School District	25	42%	CO
Sussex County Public School	4	7%	VA
Tucson Unified School District	2	3%	AZ

* Total does not add to 100 percent due to rounding.

Table F-2. Teacher Race (n=58)

Race	Percent
White	87.9%
Other	5.2%
American India/Alaska Native	3.4%
Asian	1.7%
Black or African American	1.7%
Native Hawaiian or Pacific Islander	0.0%

* Total does not add to 100 percent due to rounding.

Table F-3. Highest level of education attained (n=59)

Degree	Percent
Masters Degree	57.6%
Bachelor's degree and some graduate credit	33.9%
Master's degree plus CAGS, CAS or equivalent	3.4%
Bachelor's degree	3.4%
Doctoral Level Degree	1.7%