

Peabody College

VANDERBILT UNIVERSITY

NASHVILLE, TENNESSEE 37203



**The Alliance Project**

**Headquarters**

Peabody College, Box 160  
Hill Student Center, Rm. 101  
(615) 343-5610  
1-800-831-6134  
Fax (615) 343-5611  
alliance@vanderbilt.edu

**Washington, DC Metropolitan Office**

10860 Hampton Road  
Fairfax Station, VA 22039  
(703) 239-1557  
Fax (703) 503-8627  
Email: judysd@gte.net

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## **A Compendium of Reading Practices for Grades K-3, Listed by Grade Level**

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Compiled by Lynn Fuchs and Kim Paulsen, Center to Accelerate Student Learning (CASL), Vanderbilt University, with support from the U.S. Department of Education's Office of Special Education Programs, Grant No. 324V980001, awarded to Vanderbilt University. Statements do not represent official policies of the agency, and no endorsements should be inferred.

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Because reading skills are central to success within and beyond school contexts, preservice programs in both special and general education should include preparation that leads to their graduates' competencies in reading instruction. This compendium of reading practices is offered for that purpose.

### Preliminary Notes

**For level of intervention**, "primary" means that the practice is applied with all children in general education. "Secondary" means that the practice as used refers with subsets of students in general education as part of prereferral intervention. "Tertiary" means that the practice is used with small sets of students who demonstrate unresponsiveness to primary and secondary levels of prevention.

**For evidence**, "persuasive" means that experimental (i.e., controlled) studies provide evidence separately for students with disabilities. "Tentative" means that reasonably rigorous but non-experimental studies exist OR evidence has been provided for low-achieving but not students with disabilities. "Preliminary" means that promising early results are available.

## Practice: Ladders to Literacy

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Grade(s): K

Level of Intervention: Primary or Secondary

Abstract: Ladders to Literacy (O'Connor, Notari-Syverson, & Vadasy, 1998) was designed to develop phonological awareness and early literacy skills through activities that can be incorporated into programs for children at risk for reading failure, including children with high incidence disabilities and their typically developing peers. These activities target factors strongly related to later reading development: print awareness, oral language, and phonological blending and segmenting. The activities were field tested in kindergarten settings with small and large groups of children reflecting a range of abilities. Each activity provides suggestions for encouraging participation from students along a continuum of developmental levels. Teachers use the activities for 10-20 minutes per day, 4-5 days per week throughout kindergarten. Suggestions for getting started and integrating activities with other literacy areas are included.

Evidence: Persuasive

### Annotated References:

O'Connor, R. E., Notari-Syverson, A., & Vadasy, P. F. (1996). Ladders to literacy: The effects of teacher-led phonological activities for kindergarten children with and without disabilities. *Exceptional Children, 63*, 117-130.

Reports findings from quasi-experimental research in which outcomes for treated children were compared with children matched for type (regular or repeating kindergartners, or children with mild disabilities) in classrooms using the same background prereading curriculum. Across student types (with or without disabilities), children who had additional phonological activities incorporated into the school routine performed better on phoneme-level manipulations and reading/writing outcomes than untreated children.

O'Connor, R. E., Notari-Syverson, A., & Vadasy, P. (1998). First grade effects of teacher-led phonological activities in kindergarten for children with mild disabilities: A follow-up study. *Learning Disabilities Research and Practice, 13*, 43-52.

This is a follow-up study of children who began kindergarten with very low skill levels, including those with disabilities. The researchers found that children who used the Ladders activities in kindergarten had higher reading and spelling scores at the end of first grade than children who had not participated in Ladders activities. This effect was specific to children at risk for reading failure due to disability or very low literacy scores early in kindergarten.

O'Connor, R. E. (1999). Teachers learning Ladders to Literacy. *Learning Disabilities Research and Practice, 14*, 203-214.

Teachers in 17 kindergartens were assigned to Ladders activities or traditional kindergarten curricula. MANOVA at the end of the year found significant effects favoring children in Ladders classrooms for blending, segmenting, letter naming, and standardized measures of reading and spelling. The following year, teachers in the control classes began using the activities. A comparison between outcomes for the children of these teachers in Years 1 and 2 (controlling for teacher effects) also favored the Ladders year. Separate analyses for children with disabilities in Ladders and control classes also found significant effects favoring children in the Ladders program.

## Contacts:

- Rollanda E. O'Connor, Pittsburgh, PA      roconnor+@pitt.edu
- Russell Gersten, Eugene, OR      rgersten@oregon.uoregon.edu
- Gloria J. Johnson, Bad Axe, MI      gjjohnso@edcen.ehhs.cmich.edu
- Doug Fuchs, Nashville, TN      doug.fuchs@vanderbilt.edu
- Kevin Feldman, Sonoma, CA      kfeldman@sonoma.k12.ca.us
- David Chard, Austin, TX      dchard@mail.utexas.edu

## **Practice: Peer-Assisted Learning Strategies** \_\_\_\_\_

Grade(s): K-3

Level of Intervention: Primary, Secondary

Abstract: With respect to Peer-Assisted Learning Strategies, or PALS, every child in a general education classroom is paired so that a weaker student works with a stronger reader. The teacher uses scripted lessons to prepare students to work productively on structured activities 3 to 4 times each week, each time for 20-40 minutes (depending on age). At different grades, PALS children work on different types of activities: at Kindergarten, phonological awareness and early decoding activities; at grade 1, phonological awareness, decoding, fluency, and comprehension; at grades 2-3, fluency and comprehension.

Evidence: Persuasive

### Annotated References:

Fuchs, D., Fuchs, L. S., Mathes, P. G., & Simmons, D. C. (1997). Peer-Assisted Learning Strategies: Making classrooms more responsive to diversity. *American Educational Research Journal, 34*, 174-206.

Reports findings of a major experimental study on the efficacy of reading PALS at grades 2-6. Findings showed strong effects for students with learning disabilities, as well as for students with low- and average-achievement levels, on a variety of reading measures.

Fuchs, D., & Fuchs, L. S. (1998). Researchers and teachers working closely together to adapt instruction for diverse learners. *Learning Disability Research and Practice, 13*, 126-137.

Summarizes the research program on reading PALS, along with the research-to-practice model, by which researchers and teachers collaboratively developed and tested PALS.

Fuchs, D., Fuchs, L. S., Al Otaiba, S., Thompson, A., Yen, L., & Braun, M. (2000). *Effects of Peer-Assisted Learning Strategies in kindergarten classrooms*. Manuscript submitted for publication. Available from D. Fuchs, Box 328 Peabody, Vanderbilt University, Nashville, TN 37203.

Reports findings of a major experimental study on the efficacy of reading PALS at kindergarten. Findings showed strong effects for students with disabilities, as well as for students with low-, average-, and high-achievement levels on a variety of phonological awareness and reading measures.

Fuchs, D., Fuchs, L. S., Svenson, E., Nyman, K., Al Otaiba, S., Thompson, A., & Yen, L. (2000). Effects of Peer-Assisted Learning Strategies in first-grade classrooms. Manuscript submitted for publication. Available from D. Fuchs, Box 328 Peabody, Vanderbilt University, Nashville, TN 37203.

Reports findings of a major experimental study on the efficacy of reading PALS at first grade. Findings showed strong effects for students with disabilities, as well as for students with low-, average-, and high-achievement levels on a variety of phonological awareness and early reading measures.

#### Contacts:

- Doug Fuchs, Nashville, TN      doug.fuchs@vanderbilt.edu
- Lynn Fuchs, Nashville, TN      lynn.fuchs@vanderbilt.edu
- Kevin Feldman, Sonoma, CA      kfeldman@sonoma.k12.ca.us
- Jeff Grimes, Johnston, IA      jgrimes@aea11.k12.ia.us
- Joe Dimino, Eugene, OR      dimino@4j.lane.edu
- Pamela Stecker, Clemson, SC      stecker@clemson.edu
- Stan Deno, Minneapolis, MN      denox001@maroon.tc.umn.edu

### **Practice: Curriculum-Based Measurement \_\_\_\_\_**

Grade(s): K-3

Level of Intervention: Primary, Secondary, Tertiary

Abstract: Curriculum-Based Measurement (CBM) specifies standardized procedures for sampling the curriculum to create assessments, for administering and scoring those tests, and for graphing and interpreting the resulting database. Each weekly CBM is an alternate form representing the year-end goal in the same way. Over time, therefore, scores can be compared to each other. At kindergarten, each week's CBM presents the student with (a) randomly ordered lower- and upper-case letters and (b) orally presented words. Students respond to the letters by providing sounds; the score is the number of correct sounds. Students respond to orally presented words by segmenting sounds; the score is the number of correct sounds. In the first half of grade 1, each week's CBM presents the student with a list of closed-syllable nonsense words. Students respond either by identifying the letter sounds within words or by reading the nonsense words; the score is the number of correct sounds. At grades 2 and 3, as well as the second half of grade 1, each week's CBM presents the student with a passage at the instructional level expected for year-end mastery (so, across weeks, passages are of constant difficulty). The student has a fixed amount of time to read the passage aloud; the score is number of words read correctly in 1 minute. Each

weekly score represents the student's overall competence in the annual curriculum. This score is graphed over time to represent the student's progress toward the year-end goal and the child's responsiveness to instruction. The teacher uses the CBM graph to determine if a student is progressing adequately; if not, the teacher introduces an instructional change (or an intervention).

Evidence: Persuasive

Annotated References:

Fuchs, L. S., & Fuchs, D. (1998). Treatment validity: A unifying concept for reconceptualizing the identification of learning disabilities. *Learning Disabilities Research and Practice, 13*, 204-219.

Summarizes a substantial portion of the research base on the technical features and instructional utility of CBM. Provides a framework for using CBM within a treatment validity approach to LD identification, within which students are identified for special education when their level of achievement and rate of improvement is substantially below that of classroom peers and when, despite intervention efforts, they remain resistant to treatment.

Fuchs, L. S., & Fuchs, D. (1992). Identifying a measure for monitoring student reading progress. *School Psychology Review, 58*, 45-58.

Summarizes the program of research conducted to explore CBM reading measures other than reading aloud.

Fuchs, L. S., Fuchs, D., & Hamlett, C. L. (1993). Technological advances linking the assessment of students' academic proficiency to instructional planning. *Journal of Special Education Technology, 12*, 49-62.

Summarizes the program of research conducted on computer applications of CBM.

Contacts:

- Lynn Fuchs, Nashville, TN      [lynn.fuchs@vanderbilt.edu](mailto:lynn.fuchs@vanderbilt.edu)
- Doug Fuchs, Nashville, TN      [doug.fuchs@vanderbilt.edu](mailto:doug.fuchs@vanderbilt.edu)
- Jeff Grimes, Johnston, IA      [jgrimes@aea11.k12.ia.us](mailto:jgrimes@aea11.k12.ia.us)
- Pamela Stecker, Clemson, SC      [stecker@clemson.edu](mailto:stecker@clemson.edu)
- Stan Deno, Minneapolis, MN      [denox001@maroon.tc.umn.edu](mailto:denox001@maroon.tc.umn.edu)
- Mark Shinn, Eugene, OR      [mshinn@oregon.uoregon.edu](mailto:mshinn@oregon.uoregon.edu)

## Practice: Benchmark Word Identification Program \_\_\_\_\_

Grade(s): K-3

Level of Intervention: Primary, Secondary, Tertiary

Abstract: The Benchmark Word Identification (BWI) Program was designed to help students, in the early stages of learning to read, to become aware of patterns and consistencies in our written language and to apply a decoding process of using what they know about words to decode words they do not know. It is a teacher-directed, supplemental program to be taught to a whole class for approximately 15 to 20 minutes a day and is intended to be used in conjunction with basal or trade book programs. It can also be used to teach children at-risk of developing reading problems and those diagnosed with a reading disability in small group and/or one-on-one tutorial settings. The program is intended to help children to fully analyze the phonological and orthographic properties of a set of key words and then to use these key words to decode unfamiliar words through an analogy strategy. The program features a multisensory approach, strong emphasis on vocabulary and language development, and a direct teaching model. The BWI program differs substantially from traditional phonics programs in that it emphasizes important metacognitive skills associated with becoming a skilled word reader.

Evidence: Persuasive

### Annotated References:

Gaskins, I. W., Downer, M. A., Anderson, R. C., Cunningham, P. M., Gaskins, R. W., Schommer, M., & the Teachers of Benchmark School (1988). A metacognitive approach to phonics: Using what you know to decode what you don't know. *Remedial and Special Education, 9*, 36-41.

Describes the development of the metacognitive component of the BWI program that teaches children to use an analogy strategy to decode unfamiliar words. The paper also presents some preliminary data that supports the effectiveness of the program.

Lovett, M. W., Borden, S. L., DeLuca, T., Lacerenza, L., Benson, N., J., & Brackstone, D. (1994). Treating the core deficit of developmental dyslexia: Evidence of transfer of learning after phonologically- and strategy-based reading training programs. *Developmental Psychology, 30*, 805-822.

This empirical study compares the effects of two different forms of word identification training to promote transfer of learning by a clinical sample of children with dyslexia. One program trained phonological analysis and blending skills and provided direct instruction of letter-sound correspondences. The other program trained the acquisition, use, and monitoring of four meta-cognitive decoding strategies (based on the BWI metacognitive component). While both programs provided clear evidence of transfer of learning, the BWI program resulted in a broader-based transfer to the reading of real words. This result is important in that this type of transfer to the reading of real words has been missing from a majority of intervention studies that have focused primarily on improving phonological processing skills in children with reading disabilities.

Ehri, L. C., & Robbins (1992). Beginners need some decoding skill to read words by analogy. *Reading Research Quarterly, 27*, 12-26.

This empirical study presents data indicating that beginning readers can use an analogy strategy as an effective means of reading unfamiliar words. However, results suggest that in order for

analogizing to operate as an effective reading strategy, children must acquire a sizable store of sight words whose constituent letters are fully represented in memory. This line of research prompted the developers of the BWI program to include the strategy of fully analyzing the phonological and orthographic properties of the key words.

Gaskins, I. W., Ehri, L. C., Cress, C., & O'Hara, K. D. (1997). Procedures for word learning: Making discoveries about words. *The Reading Teacher*, 50, 312-327.

This is a review article outlining the relationship between the BWI program and Linnea Ehri's developmental stage model of word recognition. It describes how the BWI program was modified as a result of considering Ehri's theoretical model.

Gaskins, I. W. (1998). A beginning literacy program for at-risk and delayed readers. In J. L. Metsala & L. C. Ehri (Eds.), *Word recognition in beginning literacy* (pp. 209-232). Mahwah, NJ: Erlbaum.

In this chapter, Irene Gaskins (the founder of the Benchmark School) outlines the theoretical basis of the BWI program and then gives a relatively detailed description of the program. The chapter provides a good rationale of why the program relies on fully analyzing key words and the use of an analogy strategy for teaching decoding skills. It serves as a good introductory chapter for those interested in becoming familiar with the philosophy of the program.

#### Contacts:

- Irene Gaskins, Media, PA gaskinsi@aol.com
- Linnea Ehri, New York, NY lehri@gc.cuny.edu
- Donald Compton, Boulder, CO dcompton@psych.colorado.edu
- Richard Anderson, Champaign, IL csrrca@uiuc.edu

### **Practice: Success for All** \_\_\_\_\_

Grade(s): K-3

Level of Intervention: Primary

Abstract: Success for All (SFA) is a school-restructuring program currently being implemented in over 1,000 schools, primarily in urban settings. First implemented in 1987, the components include a systematic reading program, a daily 90-minute reading period, one-to-one tutoring by certified teachers, frequent assessments, professional development, a facilitator to support implementation, and a family support team. The 90-minute, schoolwide reading block that allows all students to be reassigned to smaller, homogenous reading groups across classes and grades. Every eight weeks, student reading levels are reassessed and assignments adjusted accordingly. The greatest impact appears to occur for low performing students (i.e., the lowest 25%), and in high-implementation schools. Positive effects have been reported for reading and math achievement and reduce special education referrals and placement, however, once students reach middle school, there were no significant differences between Success for All and control students. Effects vary for students with limited English proficiency.

Evidence: Tentative (little evidence for students with disabilities)

Annotated References:

Madden, N. A., Slavin, R. E., Karweit, N. L., Dolan, L., & Wasik, B. A. (1993). Success for All: Longitudinal effects of a restructuring program for inner-city elementary schools. *American Education Research Journal*, 30, 123- 148.

Describes the longitudinal efficacy of Success for All in inner-city elementary schools. Also reports a relationship between student outcomes and program implementation; in schools with weak implementation, effects were also weak; and in schools with high implementation, effects were higher.

Slavin, R. E., et al. (1996). Success for All: A summary of research. *Journal of Education for Students Placed at Risk* 1(1), 41-76.

Summarizes the research on the efficacy of Success for All over a 6-year period; reports Success for All is effective in improving reading achievement for students from disadvantaged backgrounds and for students with limited English. Describes the components of the model. Based on a series of studies, documents positive outcomes, including significant effect sizes across multiple cohorts, for students in SFA versus students in control schools. Similar results were found for low-achieving students in the lowest 25% of the classes.

Livingston, M., & Flaherty, J. (1997). *Effects of Success for All on reading achievement in California schools*. Far West Laboratory & Southwest Regional Laboratory.

This study shows that SFA kindergarten students achieved from 3 to 6 months greater in phonetical synthesis, word recognition and reading comprehension than students in matched comparison schools.

Slavin, R. E., Madden, Dolan, L., & Wasik, B. A. (1996). *Every child, every school: Success for All*. Thousand Oaks, CA: Corwin Press.

Findings suggest that only 2% of the Success for All third graders (including students with special education needs) were reading two years below grade level compared to 9% of the control students. The most positive effects were for children in the lowest 25% of their classrooms.

Smith, L. J., Ross, S. M., & Casey, J. P. (1994). *Special education analysis for Success for All in four cities*. Memphis, TN: University of Memphis, Center for Research in Educational Policy.

Over a two-year period, the researchers found significantly lower special education referrals for learning disabilities in two schools using SFA, compared to the control schools.

## Contacts:

- Robert Slavin, Baltimore, MD                      rslavin@csos.jhu.edu
- Robert Stevens, University Park, PA              rjs15@mail.psu.edu
- S. M. Ross, Memphis, TN                              smross@memphis.edu

## **Practice: Direct Instruction** \_\_\_\_\_

Grades: K-3

Level of Intervention: Primary

Abstract: Direct Instruction, developed by Siegfried Engelmann and his colleagues and implemented in Project Follow Through in the early 1970s, is concerned with rigorous analysis of exactly how decoding and comprehension programs should be constructed. In a Direct Instruction program, initial teaching of any reading strategy involves explicit instruction on each step in the sequence. Direct Instruction provides a comprehensive, research-based model for designing and implementing reading curriculum and instruction that utilizes carefully planned lessons that are organized around a highly specified knowledge base as well as a specified system for teaching and managing students. Thus teachers using Direct Instruction reading programs follow (a) scripted teaching materials that provide the sequence of instructional examples, (b) the steps in teaching a decoding or comprehension strategy, and (c) the correction procedures used if students make errors.

Evidence: Persuasive

### Annotated References:

Adams, G. L., & Engelmann, S. (1996). *Research on Direct Instruction: 25 years beyond Distar*. Seattle: Educational Achievement Systems.

Summarizes research on many of the critical features of Direct Instruction reading. Thus, research results are presented on (a) the effectiveness of the curriculum design features of Direct Instruction reading programs (e.g. sequence for introducing letter-sound relationships), (b) the effectiveness of Direct Instruction teaching sequences on student performance in content areas (e.g. reading, spelling, and language), and (c) the effectiveness of school-wide implementation of Direct Instruction programs. This research review summarizes the effectiveness of Direct Instruction for students with and without disabilities in grades K-3, served in both general and special education settings.

Tarver, S. G. (in press). Direct Instruction: Teaching for generalization, application, and integration of knowledge. *Learning Disabilities: A Multidisciplinary Journal*.

Provides a comprehensive discussion of major components of Direct Instruction and how design of instruction principles can be applied to the development of effective academic programs. In addition, discussion is provided on the specific teaching techniques used in implementing Direct Instruction programs.

## Contacts:

- Craig Darch, Auburn, AL      darchcb@auburn.edu
- Melissa Hayden, Indiana, PA      mhayden@grove.iup.edu
- Jerry Silbert, Eugene, OR      JSilb24034@aol.com
- Sara Tarver, Madison, WI      tarver@soemadison.wisc.edu
- Bryan Wickman, Eugene, OR      <http://www.adihome.org>

## **Practice: PRIDE: Prevention and Remediation of Reading Problems Through Early Identification and Direct Teaching of Early Literacy Skills**

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Grades: K-3

Level of Intervention: Primary

Abstract: Project PRIDE is a reading problem prevention model that provides extra support for at-risk and disabled readers at the first sign of reading difficulty. Key features of the PRIDE model include: (a) a battery of assessments for early identification of at-risk readers; (b) a continuum of reading interventions, from least to most intensive, to ensure appropriate reading instruction; (c) a research-based beginning reading curriculum that teaches at-risk and disabled readers phonemic awareness, the alphabetic principle, reading fluency and comprehension; (d) specific strategies for coordinating reading programs for at-risk and disabled readers with the general education reading program; and (e) a progress monitoring system that is sensitive to student growth and includes specific decision rules to ensure fluid student movement through the continuum of interventions.

Evidence: Preliminary

### Annotated References:

Dickson, S. V., & Bursuck, W. E. (1999). Implementing a model for preventing reading failure: A report from the field. *Learning Disabilities Research and Practice, 14*, 191-202.

Reports the preliminary impact on reading achievement and teacher reading instruction delivery after one year of a three-year project to prevent reading failure. Results after one year suggest that small group instruction in integrated phonemic awareness, letter sound correspondence, and reading benefits students at risk for reading failure more than whole group instruction.

Dickson, S. V., & Bursuck, W. D. (2000). *Preventing reading failure: Year 2 of a 3-year study to improve and maintain reading achievement for students at risk for reading failure*. Manuscript in preparation. Summary of results available from S. Dickson, Texas Education Agency, 1701 North Congress Avenue, Austin, TX 78701-1494.

Reports the improved reading achievement for two groups of students, those who began intensive instruction in the second semester of grade 1 and those who began in the second semester of kindergarten. Significant reading gains were demonstrated by both groups.

However, students who began in kindergarten demonstrated more gains and maintenance of reading achievement than students who began in the second semester of first grade.

Bursuck, W. D., Bolas, K., & Dickson, S. V. (2000). *Examining the effectiveness of varying levels of instructional intensity on the phonemic segmentation skills of at-risk kindergarten children*. Manuscript in preparation. Summary of results available from B. Bursuck, Faculty of Special Education, Department of Teacher Education, 147 Gabel, Northern Illinois University, DeKalb, IL 60115.

Reports findings from five case studies showing that kindergarten children at high-risk for reading problems were unable to master a phonemic segmentation task when exposed to 15 minutes of phonemic awareness conducted in a large-group setting and 15 minutes of large-group instruction plus 5 minutes of extra one-to-one practice. All at-risk students mastered the task when provided with 15 minutes of intensive, more carefully designed one-to-one instruction.

Miller-Young, R. (1999). *The impact of concrete phonemic representation on phonological awareness acquisition of at-risk kindergartners*. Unpublished dissertation. Summary of results available from R. Miller-Young, Prairie Children Preschool, Indian Prairie School District #204, PO Box 3990, Naperville, IL 60565.

Reports results of two groups of 12 kindergarten children with delayed phonemic segmentation skills who were taught to segment; one group was taught using two-dimensional boxes serving as concrete phonemic representations while the other group was taught using a strictly verbal format. Results indicated that both instructional conditions resulted in improved performance on every segmenting measure but there were no significant differences between the concrete and no concrete conditions. The concrete condition did result in a significantly superior performance on a blending measure.

#### Contacts:

- Bill Bursuck, Sycamore, IL                      Bursuck@NIU.edu
- Shirley Dickson, Austin, TX                      sdickson@tmail.tea.state.tx.us
- Mary Damer, DeKalb, IL                      Redyarrow@aol.com
- Dennis Munk, DeKalb, IL                      Munk59@Gateway.net
- Robin Miller-Young, Naperville, IL              RRMMYoung@aol.com

#### **Practice: Sound Partners** \_\_\_\_\_

Grades: 1 (primarily; has also been used with older students lacking word identification skills)

Level of Intervention: Secondary, Tertiary

Abstract: Sound Partners is a one-to-one tutoring program in early reading skills designed to be delivered by non-teacher tutors. The program targets first graders in the lowest 20% of their classrooms in reading skills who are identified by their classroom teachers. Tutors are most often recruited and paid by the schools, and trained by Sound Partners trainers. The program includes 100 scripted lessons with instructional strands in letter sound correspondence, segmenting, blending, word reading, spelling, and incorporating increasing amounts of

storybook reading practice. The lessons are reinforced with timed fluency practice in letter sounds, words, and connected text reading.

Evidence: Persuasive for at-risk first-grade students

Annotated References:

Vadasy, P. F., Jenkins, J. R., Antil, L. R., Wayne, S. K., & O'Connor, R. E. (1997). Community-based early reading intervention for at-risk first graders. *Learning Disabilities: Research and Practice, 12*, 29-39.

Reports findings of an experimental study on the effectiveness of one year of Sound Partners tutoring, compared to a group of no-treatment controls. Tutoring had significant effects on spelling and segmenting skills, and effect sizes favored the tutored students across all reading and spelling measures.

Vadasy, P. F., Jenkins, J. R., Antil, L. R., Wayne, S. K., & O'Connor, R. E. (1997). The effectiveness of one-to-one tutoring by community tutors for at-risk beginning readers. *Learning Disabilities Quarterly, 20*, 126-139.

Reports findings of an experimental study on tutoring efficacy. Tutored students outperformed the control group on reading, decoding, spelling, and segmenting, with significant effects in decoding and spelling. However, tutor efficacy was associated with significant effect sizes across all reading, decoding, segmenting, and spelling measures.

Vadasy, P. F., Jenkins, J. R., & Pool, K. (in press). Effects of tutoring in phonological and early reading skills on students at risk for reading disabilities. *Journal of Learning Disabilities*.

Reports on an experimental study of the short- and long-term effects of Sound Partners tutoring. Tutored students significantly outperformed untutored controls on measures of reading, spelling, and decoding at the end of first grade. Treatment effects diminished at follow up at the end of second grade.

Jenkins, J. R., Vadasy, P. F., Firebaugh, M., & Profilet, C. (2000). Tutoring first-grade struggling readers in phonological reading skills. *Learning Disabilities: Research and Practice, 15*, 75-84.

Summarizes five years of research on Sound Partners, and provides the perspectives of a special education teacher and elementary school principal on program implementation issues.

Contacts:

- Patricia Vadasy, Seattle, WA                      pvadasy@wri-edu.org
- Joseph Jenkins, Seattle, WA                      jjenkins@u.washington.edu
- Cathy Profilet, Seattle, WA                      CPROFILET@is.ssd.k12.wa.us
- Susan McCloskey, Seattle, WA                      SMCCLOSKEY@is.ssd.k12.wa.us
- Ron Nelson, Phoenix, AZ                      ron.nelson@asu.edu

## Practice: Reading Recovery With Specific Word Identification Strategies \_\_\_\_\_

Grade: 1

Level of Intervention: Secondary, Tertiary

Abstract: The Reading Recovery (RR) program pioneered by Clay (1985) consists of individualized reading instruction delivered by highly trained teachers. Poor readers enter the program following school screening early in first grade and are discharged approximately 20 weeks later when their reading achievement matches that of their peers. In the RR program children read books at their instructional level emphasizing the use of context and meaning-based strategies. RR places very little emphasis on building isolated word reading skills through the teaching of phonemic awareness skills and letter-sound correspondences. Recent studies suggest that RR is an effective early intervention program for many at-risk children; however, there is growing evidence that a fairly large group of children do not respond to RR. This group of nonresponsive children tend to have phonological processing skill deficits that limit the effectiveness of RR. Several studies have demonstrated that the effectiveness of RR can be improved by adding specific phonological processing and word identification strategies to the basic program. Results suggest that the number of children who fail to respond to RR can be significantly decreased by adding a specific word identification strategy strand.

Evidence: Tentative

Annotated References:

Clay, M. (1985). *The early detection of reading difficulties*. Auckland: Heinemann.

In this book, Marie Clay (the developer of RR) outlines the theoretical basis of the RR program and then gives a relatively detailed description of the program.

Shanahan, T., & Barr, R. (1995). Reading Recovery: An independent evaluation of the effects of an early instructional intervention for at-risk learners. *Reading Research Quarterly, 30*, 958-996.

This article analyzed the effectiveness of RR as an early intervention program. The authors report that RR leads to student learning. Students in RR made greater than expected gains in reading, with effects comparable to those accomplished by the most effective educational interventions. However, the authors caution that the RR was less effective and more costly than has been claimed by the promoters.

Snow C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Research Council.

This Report from the National Research Council devotes approximately four pages (pp. 255-258) to the RR program. A review of the effectiveness of RR reveals that approximately 30% of the children enrolled in RR fail to benefit from the program. In addition, the group that did not respond to RR performed significantly lower compared to responders on pretest measures of metalinguistic knowledge. These results suggest that underlying linguistic skills (e.g., phonemic awareness) may be important predictors of individual progress in the RR program.

Iversen, S., & Tunmer, W. (1993). Phonological processing skills and the Reading Recovery Program. *Journal of Educational Psychology, 85*, 112-126.

This empirical study was designed to evaluate the relative effectiveness of RR versus RR with explicit word identification training. Results indicate that children in both RR groups made better progress than did control group children. However, children in the RR with word identification condition learned more quickly and reached standard criterion faster than children who received the standard RR program.

Vellutino, F. R., Scanlon, D. M., Sipay, E. R., Small, S. G, Pratt, A., Chen, R., & Denckla, M. B. (1996). Cognitive profiles of difficult-to-remediate and readily remediated poor readers: Early intervention as a vehicle for distinguishing between cognitive and experiential deficits as basic causes of specific reading disability. *Journal of Educational Psychology, 88*, 601-638.

This study provided 15 weeks (70 to 80 sessions) of one-to-one tutoring to first-grade children at-risk of developing reading problems. The intervention program was tailored to meet the individual needs of each child through a balanced program of reading connected text and word identification strategies (similar to the RR with word identification). Results indicated reading achievement in most of the children was within or above the average range after one semester of intervention. The group of nonresponders to intervention (approximately 16% of the at-risk sample) performed significantly below responders on pretest measures of phonological skills. Again, this suggests that underlying linguistic skills (e.g., phonemic awareness) may be a predictor of individual progress in the RR program. However, this intervention program had a much smaller percentage of nonresponders compared to the traditional RR program. This indicates that the addition of specific word identification strategies to the RR program may lower the incidence of nonresponse to the RR program.

Contacts:

- Frank Vellutino, Albany, NY                      FRV89@cnsibm.albany.edu
- Gay Pinnell, Columbus, OH                      pinnell.1@osu.edu
- Donald Compton, Boulder, CO                      dcompton@psych.colorado.edu
- Timothy Shanahan, Chicago, IL                      shanahan@uic.edu

**Practice: Reading Recovery Without Word Identification \_\_\_\_\_**

Grade(s): 1

Level of Intervention: Secondary, Tertiary

Abstract: Reading Recovery was designed by Marie Clay as a one-to-one tutorial program designed to help children who had difficulty learning to read. Students work with a Reading Recovery tutor for 30 minutes per day. The goal is to help struggling readers catch up with their peers by helping them develop independent reading strategies so they can benefit from regular classroom instruction. The lessons include reading and re-reading trade books at the reader, assessment and monitoring of student progress through running records of miscue analysis, letter knowledge instruction, language experience or shared story writing, and pre-reading and reading of more challenging texts at the readers' instructional level with teacher support. The lessons are implicit rather than explicit, they do not follow a skills sequence, and vocabulary in

the text is not controlled. Rather, teachers select skills for lessons depending on the context of the book being read and the errors made by the child.

Evidence: Tentative

Annotated References:

Pinnell, G. S., Lyons, C. A., Bryck, A. S., & Seltzer, M. (1994). Comparing instructional models for the literacy education of high-risk first graders. *Reading Research quarterly, 29*, 9-39.

Reported the effects sizes of four treatments (Reading Recovery, two other one-to-one programs: Reading Success and Direct Instruction Skills Plan, and a small-group version of Reading Recovery called Reading and Writing Group) relative to four respective control groups. Although findings suggest positive effects only for the Reading Recovery group relative to its control group on all four reading measures, there was no direct comparison between treatment groups. Moreover, two of the four measures were Reading Recovery measures.

Shanahan, T., & Barr, R. (1995). Reading Recovery: An independent evaluation of the effects of an early instructional intervention for at-risk learners. *Reading Research Quarterly, 30*, 958-996.

Analyzed the existing literature on Reading Recovery. Findings suggest that Reading Recovery is an effective intervention, albeit less effective and more costly than claimed by its proponents. Reading Recovery did not eliminate referrals to special education, and approximately 10 to 30% of students did not respond to treatment.

Additional References:

Clay, M. M. (1993). *Reading Recovery, a guidebook for teachers in training*. Portsmouth, NH: Heinemann.

DeFord, D., Lyons, C., & Pinnell, G. S. (1991). *Bridges to literacy: Learning from Reading Recovery*. Portsmouth, NH: Heinemann

Contacts:

- Gay Su Pinnell. Ohio                      pinnell.l@psu.edu
- Timothy Shanahan Chicago              IL;      shanahan@uic.edu

**Practice: ClassWide Peer Tutoring (CWPT) \_\_\_\_\_**

Grades(s): 1-3

Level of Intervention: Primary, Secondary

Abstract: CWPT or ClassWide Peer Tutoring is an intra-class, same-age, reciprocal peer-tutoring program for teaching and supporting basic academic skills. Within the general education classroom, all students are paired and work with each other on assigned material during a 30-minute daily tutoring session 3-4 times per week. Scripted peer teaching strategies are used. CWPT is highly adaptable to local needs and age/ability levels of students in that the specific academic content taught in the program (reading, reading comprehension, spelling, math, science, social studies) is designed, developed, and introduced by teachers. In the case of

widely diverse academic levels, individualized materials may be used. Tutor-tutee roles are reciprocal in that half way through the session, students reverse roles, the tutor becomes the tutee and vice versa. Teachers supervise students' responding during the entire tutoring session. Tutees and tutors earn points for correct responding and for correcting errors. Points contribute to individual and team totals, leading to the selection of one winning team from two competing teams on a daily and weekly basis. Teams and partners change weekly to maintain students' interest, excitement, and develop appropriate social skills. Computer software supports formative evaluation of the program.

Evidence: Persuasive

Annotated References:

Delquadri, J., Greenwood, C. R., Stretton, K., & Hall, R. V. (1983). The peer tutoring game: A classroom procedure for increasing opportunity to respond and spelling performance. *Education and Treatment of Children, 6*, 225-239.

Reports the initial development of CWPT in collaboration between a researcher and classroom teacher seeking to include students with learning disabilities in her classroom instruction. Students with LD decreased their spelling errors on Friday tests to very low levels equal to students without disabilities.

Greenwood, C. R., Delquadri, J., & Hall, R. V. (1989). The longitudinal effects of class-wide peer tutoring. *Journal of Educational Psychology, 81*, 371-383.

Reports the effects for students who participated in CWPT relative to comparison groups during grades 1 to 4. Findings after four years indicated strong effects favoring CWPT in gains in a variety of measures including classroom observations and standardized measures of achievement.

Greenwood, C. R. (1991). Longitudinal analysis of time, engagement, and achievement of at-risk versus non-risk students. *Exceptional Children, 57*, 521-535.

The second report on the longitudinal, experiment study focused on the classroom behavioral effects of CWPT during the first three years. Results indicated strong effects favoring increased engagement in academic responding during instruction and reductions in time spent in passive attention and in disruptive, inappropriate behavior relative to comparison groups.

Greenwood, C. R., Terry, B., Utley, C. A., Montagna, D., & Walker, D. (1993). Achievement, placement, and services: Middle school benefits of classwide peer tutoring used at the elementary school. *School Psychology Review, 22*, 497-516.

A follow-up report on the experimental, longitudinal study at the beginning of 7th grade indicated continuing strong effects for CWPT students on measures of academic achievement. Importantly, CWPT students evidenced significantly less need for special education services for mental retardation, learning disabilities, and socially maladaptive behavior relative to comparison groups.

Greenwood, C. R., & Delquadri, J. (1995). ClassWide Peer Tutoring and the prevention of school failure. *Preventing School Failure*, 39(4), 21-25.

Another follow-up report completed on the experimental, longitudinal study of CWPT. At the beginning of 12th grade, results indicated strong effects favoring CWPT students on a measure of school dropout. Relative to comparison groups, few CWPT students had dropped out.

Contacts:

- Charles R. Greenwood, Kansas City, KS      greenwood@kuhub.cc.ukans.edu
- Barbara Terry, Kansas City, KS      terryb@eagle.cc.ukans.edu
- Carmen Arreaga-Mayer, Kansas City, KS      camayer@kuhub.cc.ukans.edu
- Debra Kamps, Kansas City, KS      kamps@falcon.cc.ukans.edu
- Larry Maheady, Fredonia, NY      maheady@fredonia.edu
- Barbara Mallette, Fredonia, NY      mallette@fredonia.edu
- Ann Mausbach, Liberty, MO      amausbach@mail.liberty.k12.us
- Linda Garrison-Harrell, Springfield, MO      lgh216f@mail.smsu.edu
- Maggie Childers, Grand Junction, CO      childers@mesa.k12.co.us

**Practice: Cooperative Learning** \_\_\_\_\_

Grade(s): 1-3

Level of Intervention: Primary

Abstract: Cooperative learning involves placing students in heterogeneous groups (usually of 3 to 5 students) based on academic and social abilities. The teacher provides explicit reading instruction to the whole class or to small groups. Students then work in their cooperative groups to complete various reading activities. These activities include reading aloud to each other, answering comprehension questions, practicing and using vocabulary words, retelling stories, and completing story-related writing tasks. To encourage all students' participation, group members rotate roles such as group leader, recorder, materials handler, and time keeper. Each individual is held accountable for meeting instructional objectives, usually by taking quizzes or tests based on these objectives. Cooperative groups are then rewarded based on the total or average performance of the group members.

Evidence: Tentative

Annotated References:

Goor, M. B., & Schwenn, J. O. (1993). Accommodating diversity and disability with cooperative learning. *Intervention in School and Clinic*, 29, 6-16.

Provides an overview of cooperative learning and its research background, and advocates its use in inclusive classrooms. Includes guidelines for training students to work cooperatively, for implementing cooperative learning with diverse student groups, and for evaluating its effectiveness.

Jenkins, J. R., Jewell, M., Leicester, N., O'Connor, R. E., Jenkins, L. M., & Troutner, N. M. (1994). Accommodations for individual differences without classroom ability groups: An experiment in school restructuring. *Exceptional Children, 60*, 344-358.

Reports effects of an approach for organizing reading and language arts instruction to accommodate individual differences in reading ability. The approach involved cooperative learning, cross-age and peer tutoring, supplementary phonics instruction, and classroom assistance from special education teachers. First- through sixth-grade students in one experimental and one comparison school were compared; students with disabilities in the experimental school performed significantly better than comparison students on vocabulary, comprehension, and reading measures.

Stevens, R. J., & Slavin, R. E. (1995). Effects of a cooperative learning approach in reading and writing on academically handicapped and nonhandicapped students. *The Elementary School Journal, 95*, 241-262.

Reports on the long-term effects of a cooperative learning approach to reading and language arts instruction on the achievement of students with and without disabilities. Three elementary schools using the Cooperative Integrated Reading and Composition (CIRC) program were compared with four schools using traditional instruction. After two years, CIRC students with disabilities had significantly higher achievement in vocabulary, comprehension, and language expression than their peers in comparison schools.

Stevens, R. J., & Slavin, R. E. (1995). The cooperative elementary school: Effects on students, achievement, attitudes, and social relations. *American Educational Research Journal, 32*, 321-351.

Reports the results of a two-year study of a cooperative elementary school model that included the use of cooperative learning across a variety of content areas, as well as parent involvement, peer coaching, and cooperative planning among teachers. After two years, students with disabilities in the two cooperative schools had significantly higher achievement on measures of vocabulary, reading comprehension, and language expression than those in the two comparison schools.

#### Contacts:

- Joseph Jenkins, Seattle, WA                      [jjenkins@u.washington.edu](mailto:jjenkins@u.washington.edu)
- Robert Slavin, Baltimore, MD                      [rslavin@csos.jhu.edu](mailto:rslavin@csos.jhu.edu)
- Robert Stevens, University Park, PA                      [rjs15@mail.psu.edu](mailto:rjs15@mail.psu.edu)

## **Practice: Auditory Discrimination in Depth \_**

Grade(s): 1-3

Level: Tertiary

Abstract: Developed by Patricia and Charles Lindamood, Auditory Discrimination in Depth develops phonological awareness by helping children discover the articulatory positions and mouth movements associated with the different phonemes in the English language. As part of instruction, children also learn labels for each phoneme that are descriptive of these mouth movements and positions (i.e., lip popper, tip tapper, scraper). Once children attain a high criterion of knowledge in oral awareness, they engage in an extensive series of problem-solving exercises that involve representing sequences of phonemes with either mouth-form pictures or colored blocks. This training focuses on helping them acquire sensitivity to the sequences of sounds in syllables, and it also enables them to learn to represent these sequences with concrete visual objects. Throughout the program, instructional interactions consist primarily of questions which the teacher asks to help the child discover that he/she can think about the sounds in words by both feeling what happens in the mouth and hearing the sounds with the ear. The object of this scaffolded instruction is to help children learn to verify the nature and order of the phonemes in words from their own sensory experience. As they learn to label each phoneme with a descriptive name, they are also taught to associate specific letters with each phoneme. So, once they become facile at representing sequences of sound with concrete objects, it is a natural transition to begin to represent them with letters.

Evidence: Tentative

### Annotated Bibliography:

Kennedy, K. M., & Backman, J. (1984). Effectiveness of the Lindamood Auditory Discrimination in Depth Program with students with learning disabilities. *Learning Disabilities Research and Practice, 8*, 252-259.

Reports findings from a study that contrasted an intensive, comprehensive remedial program with and without the Lindamood component. Participants were 20 students with learning disabilities matched on verbal IQ, chronological age, reading, spelling, and phonological awareness. Progress on phonological awareness and phonetic spelling strategies was significantly stronger for the students who received the Lindamood component. Performance was comparable for the two groups on reading and spelling measures.

Torgesen, J. K. (2000). Instructional intervention for children with reading disabilities. In S. Shapiro, D. Accardo, & C. Capute (Eds.), *Specific reading disability: A view of the system* (pp. 197-220). Parkton, MD: York Press.

Reports a study conducted with 180 children predicted to be in the bottom 10% of readers by second grade (with an estimated verbal IQ above 75). Children were randomly assigned to four instructional conditions in which they received 80 minutes of one-to-one supplemental reading instruction week for 2.5 years. The four groups were: (a) phonological awareness training that included Auditory Discrimination in Depth; (b) implicit phonological awareness training plus phonics instruction embedded within real word reading and spelling activities; (c) a regular classroom support group receiving individual instruction to support the goals of the regular classroom reading program; and a no-treatment control group. Children in the treatment including Auditory Discrimination in Depth had the lowest retention rate, achieved near-average standard scores on word attack and word identification measures, and demonstrated superior performance on phonological awareness and spelling tests. The superior alphabetic

reading skills of these children, however, did not correspond to significant differences better reading comprehension performance. In addition, although the alphabetic reading skills of these children approached average levels for the group as a whole, there was considerable variability in response to instruction: 24% of the group remained more than one standard deviation below normal in these skills at the end of training.

Contact:

- Joe Torgesen, Florida State University                      torgesen@psy.fsu.edu

**Practice: Repeated Reading** \_\_\_\_\_

Grade(s): 2-3

Level of Intervention: Secondary, Tertiary

Abstract: Repeated reading is intended to be used as a supplement to developmental reading programs, and is primarily implemented to increase reading fluency. It involves reading a short, meaningful passage several times until a pre-determined level of fluency is reached, then repeating the procedure with a new passage. During repeated reading, speed is usually emphasized over accuracy to avoid slowing the reader's pace. Reading speed, number of errors, and/or words read correctly are documented and often graphed to show progress.

Evidence: Tentative

Annotated References:

Dowhower, S. L. (1987). Effects of repeated reading on second-grade transitional readers' fluency and comprehension. *Reading Research Quarterly, 22*, 389-406.

Reports the effects of independent versus read-along repeated reading with second-graders of below-average reading rate. Results indicate that both repeated reading procedures significantly improved students' rate, accuracy, comprehension, and prosodic reading.

O'Shea, L. J., & O'Shea, D. J. (1988). Using repeated reading. *Teaching Exceptional Children, 26-29*.

Provides an overview, theoretical rationale, and implementation suggestions for using repeated reading in various instructional arrangements.

Rashotte, C. A., & Torgesen, J. K. (1985). Repeated reading and reading fluency in learning disabled children. *Reading Research Quarterly, 20*, 180-188.

Compares effects of three reading conditions on the reading fluency of nonfluent second through fifth graders with learning disabilities. Reading conditions included repeated readings of stories with a high degree of word overlap, repeated readings of stories with minimal word overlap, and non-repeated readings. Results suggest that repeated reading is more effective than non-repetitive reading only if stories have a high degree (at least 60%) of shared words.

Weinstein, G., & Cooke, N. L. (1992). The effects of two repeated reading interventions on generalization of fluency. *Learning Disability Quarterly, 15*, 21-28.

Reports results of a multi-treatment, single-subject research design that examined effects of repeated reading on the fluency of four second- and third-grade male students with learning disabilities. Two types of mastery criteria were compared; one required students to reread a passage until they reached three successive improvements, and the other required them to reread a passage until they read 90 words correctly in one minute. Both criteria led to fluency gains for all students; the first type was determined to be more efficient and to lead to generalization of fluency gains to unpracticed passages.

Contacts:

- Nancy Cooke; Charlotte, NC                      nlcooke@email.uncc.edu
- Joseph Torgesen; Tallahassee, FL              torgesen@psy.fsu.edu

**Practice: Collaborative Strategic Reading (CSR) \_\_\_\_\_**

Grade(s): 3

Level of Intervention: Primary

Abstract: CSR combines reading comprehension strategy instruction and cooperative learning. In CSR, students of mixed reading and achievement levels work in small, cooperative groups to assist one another in applying four reading strategies to facilitate their comprehension of content area text. These reading strategies are: (a) "preview" (prior to reading a passage, to recall what they already know about the topic and to predict what the passage might be about); (b) "click and clunk" (to monitor comprehension during reading by identifying difficult words and concepts in the passage and using fix-up strategies when the text does not make sense); (c) "get the gist" (during reading, to restate the most important idea in a paragraph or section); and (d) wrap up (after reading, to summarize what has been learned and to generate questions "that a teacher might ask on a test"). Initially, the classroom teacher presents the strategies to the whole class using modeling, role playing, and teacher think-alouds. After students have developed proficiency applying the strategies, they are divided into heterogeneous small groups where each student performs a defined role while collaboratively implementing the strategies.

Evidence: Tentative (Most of the quasi-experimental research has been conducted with fourth or fifth graders rather than third graders. However, many third-grade teachers have used CSR with their students.)

Annotated References:

Klingner, J. K., Hughes, M. T., Arguelles, M. E., Ahwee, S., & Vaughn, S. (in progress). *Outcomes for students with and without learning disabilities through Collaborative Strategic Reading.*

With reference to the performance of students in comparison classrooms, fourth graders in CSR classrooms made greater gains in reading comprehension and equal gains in content knowledge. Within the CSR condition, students in classrooms with teachers who demonstrated higher levels of implementation outperformed students in classrooms with lower implementation levels.

Klingner, J. K., & Vaughn, S. (in press). The helping behaviors of fifth-graders while using collaborative strategic reading (CSR) during ESL content classes. *TESOL Quarterly.*

This study investigated the frequency and means by which bilingual fifth-grade students helped each other while working in small, heterogeneous groups as they implemented CSR. Overall, students spent high amounts of time engaged in academic-related strategic discussion and assisted one another in understanding the text.

Klingner, J. K., Vaughn, S., & Schumm, J. S. (1998). Collaborative strategic reading in heterogeneous classrooms. *The Elementary School Journal*, 99, 3-21.

With reference to students in a control condition (n=56), fourth graders in a CSR experimental condition (n=85) made greater gains in reading comprehension and equal gains in content knowledge. Discourse analyses of peer talk during cooperative group sessions indicated that most of the discourse was academic in nature and content-related.

Vaughn, S., Chard, D., Bryant, D. P., Coleman, M., Tyler, B., Thompson, S., & Kouzekanani, K. (in review). Fluency and comprehension interventions for third-grade students: Two paths to improved fluency.

Third-grade students who participated in either a comprehension intervention (CSR) or a fluency intervention (Partner Reading) showed significant time effects but not treatment effects for rate of reading, passage reading fluency, and correct words read per minute.

#### Contacts:

- Janette Klingner, Miami, FL      jkklingner@aol.com
- Sharon Vaughn, Austin, TX      srvaughnum@aol.com
- Joe Dimino, Eugene, OR      dimino@4j.lane.edu
- Diane Bryant, Austin, TX      dpbryant@Mail.utexas.edu
- Jeanne Schumm, Miami, FL      schumm@miami.edu
- Marie Hughes, Miami, FL      mariehughes@aol.com
- Ji-Mei Chang; San Jose, CA      jmchang@isc.sjsu.edu

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