

K-PALS

Helping Kindergartners with Reading Readiness: Teachers and Researchers in Partnerships

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Kindergarten is traditionally regarded as the time to develop children's reading-readiness skills. But many children either miss this essential step or, for one reason or another, were unable to take advantage of such instruction when they were in kindergarten. How do we ensure that *all* children take these essential steps toward being literate?

To address the difficulty in connecting research and practice in this area (see box, "What Does the Literature Say?"), we developed a process for teacher-researcher collaboration that has resulted in effective and valued practices. In this article, we describe the teacher-researcher collaboration and Peer-Assisted Learning Strategies for Kindergartners, or K-PALS, which was the reading readiness program produced by the partnership. We also explain why we developed K-PALS, and we briefly describe research showing that it promotes young children's reading development and fits easily in classrooms.

Why K-PALS?

We first designed Peer-Assisted Learning Strategies (PALS) to help classroom teachers in Grades 2-6 accommodate the diverse instructional needs of low-, average-, and high-achieving students, as well as children with disabilities. PALS was not meant to be a total reading program; rather, we conceived it as a modest, supplemental set of activities conducted three times per week, 30 minutes each day. A distinctive feature of the program is that children work in pairs on structured activities, while the

teacher leads the session and monitors students' work.

We based PALS on prior research at Juniper Gardens Children's Project in Kansas City, Missouri (e.g., Delquadri, Greenwood, Wharton, Carta, & Hall, 1986), and we believed that by harnessing the power of peer mediation, teachers could provide more motivating, individualized, and intensive instruction and practice to a large majority of their students. In Grades 2-6, PALS activities are Partner Reading, Paragraph Shrinking, and Prediction Relay. At first grade, children work on Sounds and Words (to promote accurate decoding

and sight vocabulary), Fluency Building, and Story Reading.

Research on PALS in Grades 2-6 (e.g., Fuchs, Fuchs, Mathes, & Simmons, 1997; Simmons, Fuchs, Fuchs, Hodge, & Mathes, 1994) and first grade (e.g., Allor, Fuchs, & Mathes, in press; Fuchs, Fuchs, Svenson, et al., 2001; Mathes, Howard, Allen, & Fuchs, 1998) has indicated its effectiveness in promoting early reading development for many students.

During the 1995-1996 school year, we had contracts with five Title 1 (high poverty) schools in the Metropolitan Nashville School System to help teachers implement PALS. One of these

What Does the Literature Say About Reading Problems?

Reading failure spawns serious problems. Many students with poor reading skills suffer low self-esteem, break school rules, and are unlikely to graduate from high school (Juel, 1996). Illiterate adults account for 75% of the unemployed, 33% of mothers receiving aid to families with dependent children, and 60% of prison inmates (Adams, 1991). Moreover, reading problems are as pervasive as they are serious. Twenty-five percent of American adults are functionally illiterate. They cannot read a note sent home from their child's school or the directions on a medicine bottle (Riley, 1996). For people with disabilities, the numbers are even more alarming, with estimates of illiteracy ranging as high as 73% (Riley, 1996).

Given the importance of reading failure, researchers wishing to make a difference in the lives of students and teachers must develop instructional methods that are both effective and practical for classroom use. Sadly, progress toward this end has been slower than many would wish. One of several reasons for this is that teachers and researchers frequently work apart. Researchers, for example, often develop reading methods outside of school settings, with little input from teachers. Not surprisingly, teachers tend to find that these methods fail to meet their needs (for discussion, see Fuchs & Fuchs, 1998; Gersten, Vaughn, Deshler, & Schiller, 1997; Malouf & Schiller, 1995).

schools was Berry Elementary, which served children in kindergarten through Grade 2. All Berry teachers implemented PALS except those in kindergarten because we had not yet developed a program at that level. Using PALS, Berry's first-grade and second-grade teachers substantially improved their children's performance on the state's annual high-stakes test: The typical student score increased from the 28th to the 52nd percentile. As with most school improvement endeavors, the teachers in the school had begun many programs simultaneously, and it was difficult to determine how much student improvement—if any—resulted from PALS. For their part, the teachers believed PALS played an important role; and it quickly became a fixture in Berry Elementary's schoolwide plan.

After observing the students' dramatic improvement, and following discussions among the school's primary teachers, Berry's kindergarten teachers asked us to help them develop a version of PALS that might ensure that students entered the first grade with stronger reading readiness. By the end of the school year, we had developed and piloted K-PALS.

An early evaluation of this work in spring 1996 (Al Otaiba, Fuchs, Fuchs, & Thompson, 2000) suggested the potential effectiveness of K-PALS to strengthen young children's beginning reading development. Since 1996, we have continuously revised and evaluated K-PALS (see section "Results of Experimental Studies"). Five years after the initial pilot program, we believe K-PALS has great value for children with and with-

WE DESIGNED PEER-ASSISTED LEARNING STRATEGIES (PALS) TO HELP CLASSROOM TEACHERS IN GRADES 2-6 ACCOMMODATE THE DIVERSE INSTRUCTIONAL NEEDS OF LOW-, AVERAGE-, AND HIGH-ACHIEVING STUDENTS, AS WELL AS CHILDREN WITH DISABILITIES.

A Teacher Interview

Q: How hard was it to train your students to use K-PALS?

It was easy. You just start out slowly. You do it first as a group. You use good directions on the front end. Some adjustments are needed for certain pairs. PALS is excellent for training kindergarten students to work together as partners. The children learn so much about reading from PALS, but they also learn to follow directions and to cooperate—this is important in kindergarten.

Q: Why do your children like using K-PALS?

They like seeing themselves achieve. The children get very excited when they start reading books, and they can use the PALS skills to sound out and blend sounds into words.

Q: How has K-PALS helped improve your children's reading readiness?

PALS is a huge asset in improving children's reading readiness. After so much practice, all the children know their sounds automatically. They are able to read books now due to PALS. It has given them a firm base in word attack, which they wouldn't have gotten without the repetition and review PALS provides.

Q: How have your children with disabilities done with K-PALS?

Students with disabilities feel more included and feel success. I'm amazed at how far some of these children have come in knowing all their sounds and sight words. The pictures in PALS "Sound Play" are really helpful for children with language delays. Isolating first sounds and ending sounds, blending sounds into words, and rhyming are all good for these children. Students with disabilities benefit from PALS immensely. They do all the procedures as the other students do, just at a slower pace. The structure and repetition is very good for these students. They would never be reading now without PALS. There are students who wouldn't be able to go on to first grade if they hadn't done PALS.

Q: What advice do you have for other teachers considering using K-PALS?

Use it! It's a great asset to children. It makes stronger readers and readers who are aware of the skills involved in blending. You are also teaching a life skill . . . working together. It's worth the extra trouble to teach kids cooperation, which is one of the main goals of kindergarten. Children in the beginning of kindergarten are able to do PALS activities. This includes the students with disabilities who catch on at a slower pace.

—Interview with Jean Gregory, a Nashville teacher who uses K-PALS, March 20, 2000.

out disabilities, and that it is ready for widespread use.

What Is K-PALS?

In K-PALS, pairs of children work together, just as they do in PALS at higher grade levels. In K-PALS, kindergarten teachers introduce the program to students in eight lessons by modeling the activities in a whole-class format. The teacher plays the role of Coach (i.e., tutor) while the entire class responds in choral fashion as the Reader (i.e., tutee). The teacher then provides individual children an opportunity to assume the role of Coach. Finally, stu-

dents begin to tutor each other as the teacher carefully monitors and provides corrective feedback to ensure the children's mastery. In this way, students gain experience participating as both Coach and Reader; and they become

IN EACH CLASS, THE TEACHER PAIRS HIGH-PERFORMING STUDENTS IN READING WITH THE LOW-PERFORMING STUDENTS.

BY HARNESSING THE POWER OF PEER MEDIATION, TEACHERS CAN PROVIDE MORE MOTIVATING, INDIVIDUALIZED, AND INTENSIVE INSTRUCTION AND PRACTICE TO MOST STUDENTS.

familiar with PALS rules, procedures, and activities.

In each class, the teacher pairs the highest-performing student in reading with the lowest-performing student; the second highest student with the next-to-last student; and so on. Pairs remain together for 4 weeks, at which point the teacher makes new pairings. Teachers conduct K-PALS in three 20-minute ses-

sions each week. During each session, children work on a K-PALS “lesson page,” which they repeat at least four times (twice for each member of a pair).

Teachers teach the children a standard correction procedure, which is structured similarly for all K-PALS activities (see example in the “Sounds and Words—What Sound?” section). This correction procedure permits children to provide immediate and substantive feedback to their partners.

K-PALS incorporates “Sound Play,” which addresses phonological awareness, and “Sounds and Words,” which focuses on letter-sound correspondence and beginning decoding. There are 72 K-PALS lessons (see Figure 1 for a Sounds and Words lesson page), the layout of which reflects the influence of Carnine, Silbert, and Kameenui’s (1990) work. Each time a pair finishes part of a lesson, they mark one happy face, switch roles (Coach becomes Reader and vice versa), and repeat the lesson segment.

Sound Play

In Sound Play, five types of activities address rhyming, isolating first sounds and ending sounds, blending sounds, and segmenting words into sounds. Each lesson page uses pictures of common animals and objects. Children are taught a standard routine for each of the five types of lesson pages. For example, a rhyming page shows seven sets of pictures; one set shows pictures of a cat, mat, carrot, and bat. The Coach says, “Cat, mat. What rhymes? Carrot or bat?” The reader answers, “Bat.” (See Figure 2.)

Sounds and Words

Sounds and Words incorporates two types of activities, “What Sound?” and “What Word?”

What Sound? This activity displays alphabetic letters randomly presented from left-to-right in line-by-line format. Interspersed among the letters are large black stars. The new sound for a given lesson is in a box with a key picture. Before the lesson, the teacher intro-

Figure 1. Sounds and Words Lesson Page

Lesson 32

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Figure 2. Sound Play Rhyming Page

Lesson 41

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Rhyming -at & -an words

duces the new sound. The Coach then points to each letter on the lesson page and asks his or her partner, "What Sound?" The Reader responds. The Coach praises the Reader for an appropriate answer or corrects an error by saying, "Stop. You missed that sound. That sound is ____." The Coach asks again, "What Sound?" After the Reader responds with the correct answer, the Coach says, "Good. Read that line again." At each large black star, the coach directs a supportive statement to the Reader, such as "Good job." A new sound is introduced every other lesson (see Figure 1).

What Word? This activity is comprised of nondecodable sight words, decodable words, and simple sentences (see Figure 1). At the beginning of a K-PALS session, the teacher introduces a new word to the class. The Coach then points to the sight word on the lesson page and asks, "What word?" Students take turns identifying the sight words, which build cumulatively across lessons. Also on the lesson page are decodable words that can be sounded out using letter sounds practiced in earlier lessons. Each letter of a word is placed in a sound box (Elkonin, 1973). The Coach says, "Read it slowly." The Reader says the letter sounds slowly as he or she touches the individual sound boxes. The Coach then says, "Sing it and read it." Lessons build cumulatively to incorporate more words within a given word family (e.g., rat, fat, cat) as well as additional word families (e.g., in, an, it). As vowels are introduced, students decode words that combine all learned vowels and consonants. Finally, students read simple sentences that include the sight words and decodable words learned in earlier lessons. The Reader reads the sentences to the Coach; then the children reverse roles.

Results of Experimental Studies

Since developing the K-PALS prototype in 1995-1996, we have conducted two large-scale, experimental studies investigating the importance of K-PALS. The first study examined the effectiveness of teacher-led phonological awareness training with and without a peer-mediated decoding component (Fuchs,

Fuchs, Thompson, Al Otaiba, et al, in press). The second explored the effectiveness of a peer-mediated decoding component with and without teacher-led phonological awareness training (Fuchs, Fuchs, Thompson, Yen, et al., 2000). In each study, 33 kindergarten classrooms participated; teachers implemented the experimental program for 20 weeks; and we conducted pretests and posttests with more than 400 students on reading readiness, phonological awareness, word-reading, and spelling measures. In addition, in the first study, we studied the progress of about 300 students into the following school year and tested them again.

Results from both studies were encouraging. To illustrate, for students with disabilities and low-, average-, and high-achieving students without disabilities in the first study, students in the K-PALS group showed higher phonological awareness compared to students in the control group. Even more impressive, K-PALS children across the achievement continuum (including children with disabilities) performed, on average, more competently on word-reading measures compared to children in the control condition. Moreover, these differences were sustained when the children were tested 5 months later (Fuchs, Fuchs, Svenson, et al., 2001).

Finally, K-PALS is a popular program that fits well in most kindergarten classrooms. (See box "A Teacher Interview". One indicator of this "good fit" is that a large majority of teachers who participated in the K-PALS pilot work and subsequent research continue to use the program long after we have left their classrooms. Another indication of the program's popularity is the strong demand for K-PALS manuals and workshops.

Final Thoughts

K-PALS helps many children with and without disabilities achieve a strong start in learning how to read. K-PALS also promotes durable, or sustainable, outcomes. We believe we and our teacher-partners produced a successful innovation because

- Teachers, not researchers, identified the problem.

- Teachers and researchers collaborated to design the solution.

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If you are interested in obtaining more detailed information about PALS reading programs at kindergarten, first grade, Grades 2-6, and high school, as well as PALS math programs, visit our Web site (<http://www.peer-assistedlearningstrategies.org>) or email us (pals@vanderbilt.edu).

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