

# Current Practice **ALERTS**

Sponsored by: Division for Learning Disabilities (DLD) and  
Division for Research (DR) of the Council for Exceptional Children

A focus on:

**Peer-Assisted Learning  
Strategies (PALS) for  
Elementary Reading**

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## What Is It?

**Peer-Assisted Learning Strategies (PALS)** refers to a reciprocal peer tutoring routine intended to serve as supplemental instruction to support strong core curriculum. Originally created by Drs. Lynn and Doug Fuchs at Vanderbilt University, PALS has been developed to complement classrooms instruction in reading. Guided by classroom teachers, PALS systematically incorporates cooperative learning, highly-structured peer interactions, reinforcement of academic behaviors, and multiple opportunities to practice.

PALS provides differentiated practice for students in general education classrooms. Within the program, students work with partners and fulfill specific, scripted roles as lesson leader (coach) and lesson participant (player). PALS provides opportunities for students to practice fundamental skills and receive instant and corrective feedback. This review of PALS concentrates on the effectiveness of the PALS framework for students with learning disabilities in elementary classroom settings.

## For Whom is it Intended?

PALS is available for reading and mathematics. This *Current Practice Alert* focuses on the research base for PALS Reading at the elementary level. The PALS Reading system is designed to be implemented in conjunction with, but not replace, existing reading curricula. PALS Reading scripts have been developed for students in kindergarten through grade 6 (although PALS Reading also exists for high school, we focus this review on PALS at the elementary level). As a class-wide activity, PALS is intended for students with varying ability levels, including students with and without learning disabilities or learning difficulties. It can be implemented by general education



teachers or special education teachers. PALS incorporates several elements of instructional strategies that have documented effectiveness for students with learning disabilities, such as explicit instruction, multiple opportunities to respond, immediate and corrective feedback, and ability to differentiate materials to meet the instructional needs to the students.

## How Does it Work?

PALS utilizes both teacher-directed activities and student-directed activities. The first phase is more teacher directed; the teacher establishes classroom routines and behavior expectations. The second phase is more student directed. During the second phase, students work in pairs to implement scripted activities. The teacher monitors student directed activities, paying close attention to engagement and performance, during the student-led portions of the PALS.

**Teacher-directed Activities.** Teachers must establish clear expectations for students prior to peer-led lessons, as this is essential to overall success of PALS. In the first several lessons, the teacher explicitly describes the PALS rules and models the routines to the students. Lessons include how to perform the behavioral expectations for the two student roles, coach and player; how to provide immediate feedback during the activity; and how students receive reinforcement (e.g., positive-reinforcement behavior chart). The teacher models activities and engages students in guided practice prior to student-directed activities. Teacher modeling varies by grade level and content.

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## ABOUT THE AUTHORS



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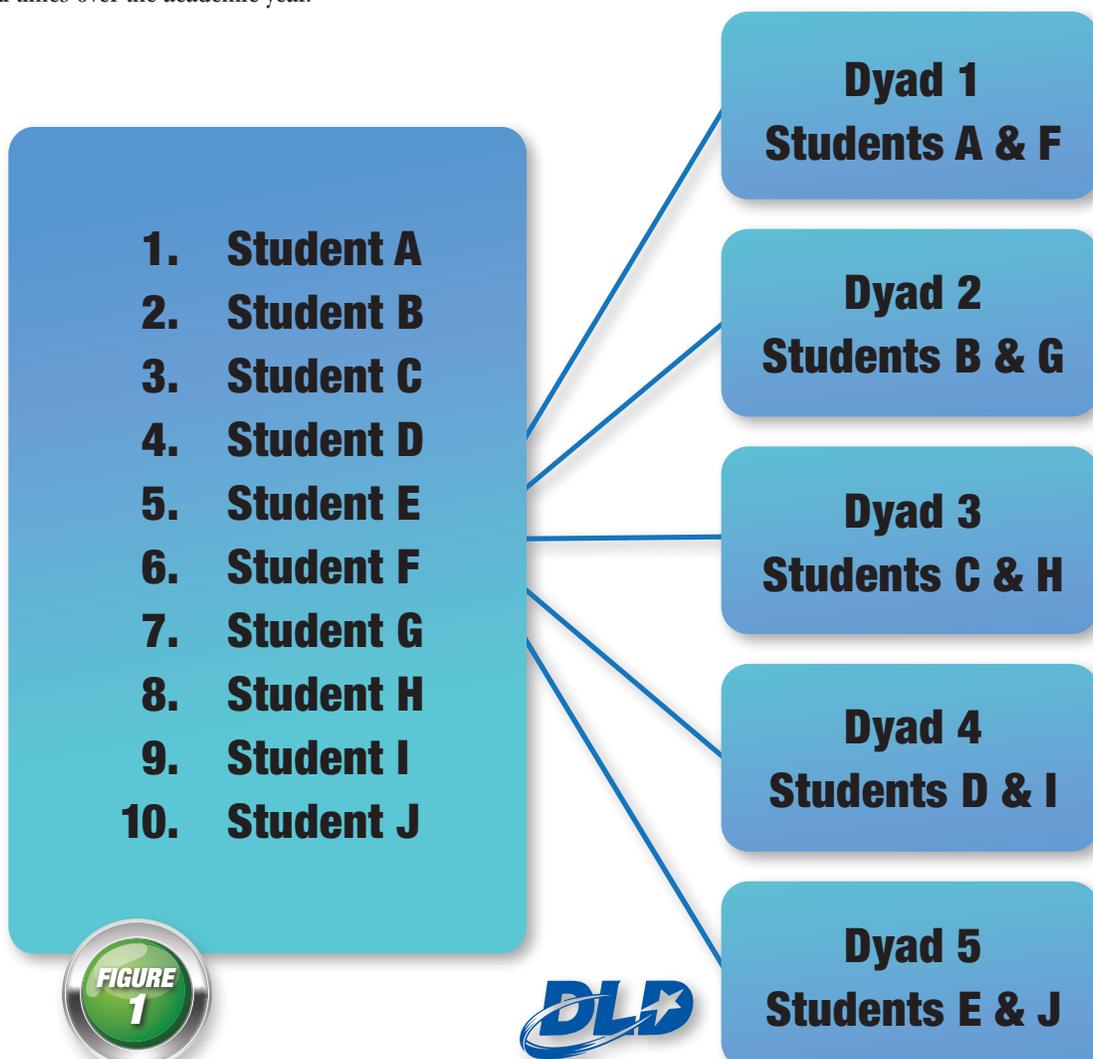
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Prior to student-led lessons, the teacher creates a list of partners. Partners should be of similar – but not exact- skill levels, with one partner demonstrating stronger performance of targeted skills. This can be done by ordering the students by current performance, splitting the list in half and matching the students from the first half to those in the second half. For many studies included in this review, PALS was implemented in conjunction with curriculum-based measures, which include initial evaluation of skill performance and continued formative assessment of performance over time. Alternatively, district screening and benchmark assessments may be used to rank students. For example (see Figure 1 below), a teacher has 10 students (A-J) and after conducting universal screening, she ranks students by performance and splits her list into two groups—students with the top five scores (students A-E) and students with the lowest five scores (students F-J). The top performing students in each group (A and F) are paired, the second-highest performing students in each group (B and G) are paired, and so on. Thus, each dyad has a more proficient and a less proficient partner, but skill levels are not widely discrepant. Although these procedures are recommended for ease of grouping, teachers have flexibility to switch partners as necessary and are encouraged to do so several times over the academic year.

**Self-directed Activities.** When students demonstrate ability to perform roles as coach and player, the lessons become more student-directed. Within each pair, the student who demonstrates stronger performance in the content acts as the player first. In the A-F student pairing, for example, Student A would be the player first and Student F would be the coach first. This allows the student with stronger skills to more accurately model desired skills. The coach and player work together on structured activities where the coach asks scripted questions, provides immediate feedback, and gives encouraging reinforcement. The coach provides corrective feedback when a wrong answer is given and prompts their partner to share the correct answer. Finally, coaches record their partner’s performance on a recording sheet. After the pair has completed the activities, the students switch roles and repeat the lesson.

During peer-led activities, the role of the teacher shifts from instruction delivery to student performance monitoring. The teacher monitors the fidelity of implementation (e.g., are students doing what they are supposed to do) and student responses. Implementation Checklists are available that allow the teacher to document fidelity of classroom arrangements and set-up as well as partner activities.



**FIGURE 1**



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On these forms, the teacher marks if a behavior is observed, not observed, or not applicable to the lesson. The teacher may also systematically observe to monitor student progress and make instructional decisions. For example, if the teacher observes during PALS Reading that a text is too difficult for a pair of students (e.g., students make several mistakes and demonstrate frustration), the teacher can provide the partners more appropriate independent-level text for the next PALS session. Similarly, the teacher can provide more challenging texts when warranted by observation of student performance. If the teacher observes a pattern of mistakes within a partnership or across partnerships, the teacher can provide intervention for specific skills with a small group of students during general language arts.

**PALS Reading.** PALS Reading is intended to be used as a supplemental reading program and is implemented several times a week. The kindergarten skills taught in the PALS program include phonologic awareness, phonics (including decoding and sight words), and an introduction to fluency. First grade skills build to phonological awareness, phonics (decoding and sight words), and fluency. Grades 2-6 include fluency and comprehension skills and strategies (retelling, summarizing, predicting). For grades 2-6, the books used for PALS Reading are selected by the teacher and based on students' reading levels. For this reason, the books may differ by dyad. For PALS reading, the recommended schedule is 3 times a week, for 20-30 minutes a day in kindergarten. The time allotted increases to 35-40 minutes, 3 times a week for students in grades 1-6.

### How Effective is It?

**Research Base for Reading.** A large body of research supports to the use of PALS for reading instruction. Several peer-reviewed studies support the effectiveness of PALS Reading when implemented with elementary level students (e.g., Fuchs, Fuchs, Mathes, & Simmons, 1997; Saenz, Fuchs, & Fuchs, 2005). For early reading, WWC recognized 13 studies that were eligible for review and three that met their standards for inclusion in the review (i.e., Mathes & Babyak, 2001; McMaster et al., 2005; Stein et al., 2008). At the elementary level, two studies have been reviewed by the WWC (Fuchs et al., 1997; Saenz et al., 2005); this evaluation concluded that PALS has a positive impact on both reading fluency and reading comprehension when implemented with students with learning disabilities. WWC reported that the studies reviewed showed the largest effects for students on the alphabetic principle, which consists of phonemic awareness, letter naming, and phonics constructs.

**Research Base for Culturally and Linguistically Diverse Learners.** Research on culturally and linguistically diverse learners is still growing. Currently, studies have shown positive effects of PALS on culturally and linguistically diverse learners. Saenz, Fuchs, and Fuchs (2005) randomly assigned 132 native Spanish-speaking English language learners in Grades 3-6 to PALS reading or a business as usual group. Results indicated that students

in the PALS group outperformed the comparison group on reading comprehension measures. Additionally, Calhoun, Al Otaiba, Ciah, King, and Avalos (2007) demonstrated statistically significant impact on Grade 1 English Learners' phoneme segment fluency, nonsense word fluency, and oral reading fluency in a two-way bilingual immersion program.

### How Practical Is It?

For teachers of inclusive classrooms, PALS may provide practical ways to differentiate student practice and increase student participation. PALS may feasibly be implemented as piece of a larger comprehensive instruction approach aimed at ameliorating academic difficulties for children with learning disabilities. Teachers who participated in the published studies communicated that the program was feasible (e.g., Fuchs et al, 2001). Baker and colleagues (2004) suggested that high-quality professional development, alignment with district and state mandates, autonomy in teaching on non-PALS days, and computer-based systems to monitor student progress may support sustained use and fidelity of PALS implementation.

PALS booklets can be ordered through Vanderbilt University (see "Where to Learn More?" section). The explicit manuals instruct teachers on how to implement PALS, including how to teach each lesson. The manuals have materials that can be duplicated, including classroom signs, student scripts, and behavior management materials. For an additional fee, teachers can receive training from individuals associated with the program.

### What Questions Remain?

While PALS offers students engaged opportunities for students to practice appropriate skills, opportunities for more research exists. Since researchers associated with developing PALS have conducted the majority of research supporting the intervention, more research is needed from independent researchers. Replication of research is needed to support conclusions. In the published research, PALS takes place in heterogeneous settings with learners at high, mid, and low performance levels. Future research is needed to evaluate the effectiveness or value added of PALS in self-contained classrooms or schools. Further investigations with English language learners with or without disabilities are also warranted.

### Where to Learn More?

PALS is available through the Vanderbilt Kennedy Center for Research on Human Development. General information, including videos is available here:

<http://kc.vanderbilt.edu/pals/>

Current pricing is available here:

<http://vkc.mc.vanderbilt.edu/pals/order.html>



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Each *Alerts* issue focuses on a single practice or family of practices that is widely used or discussed in the LD field. The *Alert* describes the target practice and provides a critical overview of the existing data regarding its effectiveness for individuals with learning disabilities. Practices judged by the Alerts Editorial Committee to be well validated and reliably used are featured under the rubric of **Go For It**. Those practices judged to have insufficient evidence of effectiveness are featured as **Use Caution**.

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