

# What Works Clearinghouse



## Peer-Assisted Learning Strategies

**Program description** *Peer-Assisted Learning Strategies* is an instructional program for use in elementary school classrooms to improve student proficiency in reading and math. It was developed for use with students with diverse academic needs, including English language learners. Although other programs emphasize peer-to-peer

learning strategies that can be utilized in classrooms, this report focuses on *Peer-Assisted Learning Strategies* because of its possible usefulness with students with diverse academic needs, including English language learners with learning disabilities.

**Research** One study of *Peer-Assisted Learning Strategies* for English language learners met the What Works Clearinghouse (WWC) evidence standards. The study included 132 Spanish-speaking English language learners from grades 3–6 in South Texas.<sup>1</sup> The

WWC considers the extent of evidence for *Peer-Assisted Learning Strategies* to be small for reading achievement. No studies that met WWC standards with or without reservations addressed math achievement or English language development.

**Effectiveness** *Peer-Assisted Learning Strategies* was found to have potentially positive effects on reading achievement.

	<i>Reading achievement</i>	<i>Mathematics achievement</i>	<i>English language development</i>
<b>Rating of effectiveness</b>	Potentially positive	na	na
<b>Improvement index<sup>2</sup></b>	Average: +12 percentile points Range: +6 to +24 percentile points	na	na

na = not applicable

1. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.  
 2. These numbers show the average and range of improvement indices for all findings across the study.

## Additional program information

### Developer and contact

Developed by Lynn and Doug Fuchs, *Peer-Assisted Learning Strategies* is distributed by Vanderbilt Kennedy Center for Research on Human Development. Address: Vanderbilt University, Attn: Flora Murray/PALS Orders, Box 328 Peabody, Nashville, TN 37203-5701. Email: [flora.murray@vanderbilt.edu](mailto:flora.murray@vanderbilt.edu). Web: <http://kc.vanderbilt.edu/pals>. Telephone: (615) 343-4782.

### Scope of use

*Peer-Assisted Learning Strategies*, developed more than ten years ago, was designed to be used with all students—from kindergarten through high school. It has been implemented in Tennessee, and teacher trainings have been conducted in other states, including Iowa, Minnesota, Illinois, Arizona, and Ohio. The program has been used with English-proficient students with learning disabilities; the developers have also expanded its scope of use to include English-language learners with learning disabilities.

### Teaching

The program uses both instructional principles and practices and peer mediation to help students with math and reading.

## Research

One study reviewed by the WWC investigated the effects of *Peer-Assisted Learning Strategies* and included 132 students in 12 classrooms. The study (Sáenz, Fuchs, & Fuchs, 2005) was a randomized controlled trial that met WWC evidence standards. Although the primary purpose of the study was to examine the effects of the intervention on the reading performance of English language learners with learning disabilities, the study also examined the intervention's effectiveness on the reading performance of English language learners at various levels of achievement. All students were in grades 3–6 and were English language learners—at least two students in each classroom had a learning disability. The program was conducted during reading instruction periods only, using the reading version of *Peer-Assisted Learning Strategies* for grades 2–6. Students in the intervention

The math program can be used with students in kindergarten through sixth grade, and the reading program can be used with students in kindergarten through high school. Teachers assign students to pairs based on an area in which one student is deficient and the other is proficient. Students are assigned different partners throughout the intervention and have the opportunity to be both the provider and recipient of tutoring. Activities last 25–35 minutes two to four times a week and are intended to supplement the existing reading and math curriculum.

### Cost

*Peer-Assisted Learning Strategies* materials range from \$15 to \$35. The *Math Peer-Assisted Learning Strategies* video (\$15) is necessary for grades 2–6, and large print lessons (\$15) are recommended for using *Reading Peer-Assisted Learning Strategies* in kindergarten classrooms. All other materials—the teacher's manual (\$35), overview video/DVD (\$15), and math student materials (\$25)—are optional and specific to reading or math for different grade levels. Additional information can be found on the *Peer-Assisted Learning Strategies* website (<http://kc.vanderbilt.edu/pals>).

groups were rank-ordered by reading ability and then divided into two groups (high and low ability levels). Stronger readers were paired with weaker readers, and both students in each pair served as the tutor and tutee for each of the three reading activities (partner reading with story retell, paragraph shrinking, and prediction relay). Reading instruction for students in the control group was unchanged—it was mainly teacher-led and consisted of little one-on-one peer instruction.

### Extent of evidence

The WWC categorizes the extent of evidence in each domain as small or moderate to large (see the [What Works Clearinghouse Extent of Evidence Categorization Scheme](#)). The extent of evidence takes into account the number of studies and the

## Research (continued)

total sample size across the studies that met WWC evidence standards with or without reservations.<sup>3</sup>

The WWC considers the extent of evidence for *Peer-Assisted Learning Strategies* to be small for reading achievement. No

studies that met WWC standards with or without reservations addressed math achievement or English language development.

## Effectiveness Findings

The WWC review of interventions for English language learners addresses student outcomes in three domains: reading achievement, mathematics achievement, and English language development.

*Reading achievement.* Sáenz et al. (2005) reported that one of three outcome measures was statistically significant (number of questions correct), but the WWC could not confirm this finding.<sup>4</sup> The overall size of the impact was large enough to be considered substantively important by WWC standards, so the WWC rated this intervention as having potentially positive effects on reading achievement.

## Rating of effectiveness

The WWC rates the effects of an intervention in a given outcome domain as: positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design; the statistical significance of the findings;<sup>5</sup> the size of the difference between participants in the intervention and the comparison conditions; and the consistency in findings across studies (see the [WWC Intervention Rating Scheme](#)).

## The WWC found Peer-Assisted Learning Strategies to have potentially positive effects for reading achievement

## Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see [Technical Details of WWC-Conducted Computations](#)). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement

index is based entirely on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analyses. The improvement index can take on values between -50 and +50, with positive numbers denoting results favorable to the intervention group.

The average improvement index for reading achievement is +12 percentile points across the one study, with a range of +6 to +24 percentile points.

3. The Extent of Evidence Categorization was developed to tell readers how much evidence was used to determine the intervention rating, focusing on the number and size of studies. Additional factors associated with a related concept, external validity, such as the students' demographics and the types of settings in which studies took place, are not taken into account for the categorization.
4. Although the study assessed the effects of the intervention on students with learning disabilities, effects of the same magnitude were shown for high achieving students.
5. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation, see the [WWC Tutorial on Mismatch](#). See [Technical Details of WWC-Conducted Computations](#) for the formulas the WWC used to calculate the statistical significance. In the case of *Peer-Assisted Learning Strategies*, a correction for clustering and multiple comparisons was needed. Note that classroom-level data were reported in the study, but the WWC obtained student-level data from the study authors, which were used for calculating statistical significance.

**The WWC found  
Peer-Assisted Learning  
Strategies to have  
potentially positive  
effects for reading  
achievement** *(continued)*

**Summary**

The WWC reviewed one study on *Peer-Assisted Learning Strategies*. This study met WWC evidence standards. Based on this study, the WWC found potentially positive effects on reading achievement. The evidence presented in this report may change as new research emerges.

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**References**

**Met WWC evidence standards**

Sáenz, L. M., Fuchs, L. S., & Fuchs, D. (2005). Peer-Assisted Learning Strategies for English language learners with learning disabilities. *Exceptional Children*, 71(3), 231–247.

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**For more information about specific studies and WWC calculations, please see the [WWC Peer-Assisted Learning Strategies Technical Appendices](#).**