



Strategy Instruction: A Potential Intervention for Struggling Readers

RESEARCH IN BRIEF

June 2008

Strategy instruction can be a potentially useful tool for improving the reading comprehension of struggling high school students, according to a recent study by REL Central.

Educators from REL Central’s seven state service region (Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, & Wyoming) have requested access to scientifically valid research on practices and policies for teaching diverse groups of high school students. In response, we set out to identify evidence-based practices to help high school teachers teach struggling readers. A search of the research on struggling readers and reading comprehension revealed an inventory of relevant interventions for struggling readers, including *strategy instruction*, which we selected as the intervention of interest for this study.

Trabasso and Bouchard (2002) define *strategies* themselves as “specific, learned procedures that foster active, competent, self-regulated, and intentional learning” (p. 176). *Strategy instruction*, then, is defined as teaching students explicitly to use and articulate these strategies (Trabasso & Bouchard, 2002).

Several key findings emerged:

1. First, little research that meets the What Works Clearinghouse (WWC) standard for rigorous design has been conducted.
2. The lone study that met evidence screens (Fuchs, Fuchs, & Kazdan, 1999) indicates that the use of peer-assisted learning strategies (PALS) have a substantively positive effect for struggling high school readers. We have reservations about attributing improved comprehension to PALS because teachers, not students, were randomly assigned to the intervention, comprehension was measured using only researcher-developed assessments and one type

of text, and the total sample size (102 students) was small and geographically limited to the Southeast.

4. Further research is needed to strengthen the evidence base. Priorities for future research include randomly assigning students to the intervention and using better and broader outcome measures for reading and reading comprehension.

STRUGGLING READERS AT THE HIGH SCHOOL LEVEL

Reading difficulties can occur at any age, and early intervention can be a key aspect of mitigating persistent reading problems. Although high school texts usually involve more abstract, dense, and complex content than do elementary texts, high school teachers are typically not prepared to help their students with the more demanding reading tasks, such as preparing for class discussion based on reading of textbook passages and other written material (Balfanz, McPartland & Shaw, 2002; Langer, 1999). And, as a recent report by the National Association of Secondary School Principals (2005) notes, it is critical that secondary school teachers “better understand and teach specific literacy strategies to help students read and extract meaning from the written material used to teach the course content” (p. 1).

The need for interventions is clear: in many schools, struggling readers comprise one-quarter to two-thirds of all entering freshman (Neild & Balfanz, 2006). So what constitutes a “struggling reader?” For this study, *struggling readers* is defined broadly and inclusively, adopting a definition from the U.S. Department of Education

*Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, & Wyoming.

Striving Readers Program. This definition characterizes struggling readers as students who read at least two years below grade level (Federal Register/Vol. 70, No. 189/ Friday, September 30, 2005/Notices, p. 57257).

STRATEGY INSTRUCTION: A PROMISING APPROACH

Strategy instruction is an approach to helping students become more active, organized, and thoughtful learners (Gersten, Fuchs, Williams & Baker, 2001). This approach aligns with many states' academic expectations for high school students. As acknowledged in numerous national and state standards documents, high school students are expected to use a range of automatic monitoring and self-correction methods (e.g., rereading, slowing down, sub-vocalizing, consulting resources, questioning).

STUDY METHODOLOGY

We used the What Works Clearinghouse (WWC) criteria for identifying scientifically-valid research to identify and screen relevant studies on struggling high school readers.

The three stages of the What Works Clearinghouse's study review process include: (1) searching for and screening research reports for relevance; (2) systematically applying evidence standards and categorizing studies accordingly; and, for studies that met evidence standards either with or without reservations, (3) systematically describing participant and other study characteristics, intervention characteristics, outcomes, and findings (What Works Clearinghouse, September 2006).

LITERATURE SEARCH RESULTS

We searched for relevant studies using bibliographic databases and lists of publications from prior reviews and relevant Web sites. We conducted 26 searches between March 2006 and February 2007, which located a total of 1,423 non-duplicative study reports. After initial review of the study abstracts, we considered 215 for further relevance screening.

Studies were considered relevant if they:

- examined the effectiveness of *strategy instruction* for improving the reading comprehension of struggling high school readers, including students with learning disabilities;
- involved students in grades 9, 10, 11 and/or 12 and listed reading comprehension as an outcome measure; and

- were published in the years since the passage of the original Individuals with Disabilities Education Act (IDEA) (Education for All Handicapped Children Act, PL 94-142) (1975 to 2007).

Of the 215 studies held for further screening, the vast majority (209) were excluded as not relevant. Seven study reports were held for evidence screening. Of these seven studies, one (Fuchs, Fuchs, & Kazdan, 1999) passed the WWC evidence screens and was categorized as “*meets evidence standards with reservations.*”

RESULTS FROM ONE STUDY OF PEER-ASSISTED LEARNING STRATEGIES

Peer-assisted learning strategies (PALS) are a form of class-wide tutoring in which pairs of higher- and lower-performing readers work together in a structured way. Activities focus on student oral reading, questioning strategies, and the ability to make and confirm or disconfirm predictions to help students identify and summarize passage main ideas.

Fuchs, Fuchs and Kazdan examined the effects of this instructional strategy on student reading comprehension. They randomly assigned 18 high school remedial reading/ special education teachers, either to use peer-assisted learning strategies (PALS) to teach reading or to continue “business as usual,” to examine the effects of this strategy on student reading comprehension.

The study took place at 10 high schools in one metropolitan southeastern school district and involved nine intervention classrooms and nine comparison classrooms. Across these two groups of classes, 102 high school students in remedial or special education classes participated in the study. The average age of the students was just under 16 years old. Students in both groups of classes were equally distributed across four diagnostic categories: remedial readers, learning disabilities, mild mental retardation, and other disabilities. Reading comprehension was measured with both pre- and post-tests; intervention and comparison groups were equivalent on the reading comprehension pretest.

The unbiased estimate of PALS' effect on struggling high school students' reading comprehension is 0.34—equivalent to a gain of 13 percentile points on a standardized test. PALS was effective at improving performance in reading comprehension when the struggling readers in this sample engaged in three key collaborative activities: (1) reading passages aloud with partner modeling and coaching, (2) formulating a general

understanding of what they read by asking and answering questions about each paragraph, and (3) predicting and confirming or disconfirming predictions of what would be learned next.

FINDINGS AND IMPLICATIONS

Although the present evidence indicates that PALS does have a positive effect for struggling high school readers, caution is advised in attributing improved comprehension to PALS, given that students were not randomly assigned to the intervention.

Further research is needed to strengthen the evidence base. A first step would be to randomly assign students to the

intervention. Better and broader outcome measures are also needed to assess the effect of peer-assisted learning. Different outcome measures in future studies could include passages with grade 7 or higher readability. A state high school reading assessment could also be included to evaluate whether benefits might accrue for high-stakes indicators of achievement. To accommodate struggling readers' difficulties and reduce barriers to reading, studying the effects of peer-assisted learning on listening comprehension would also be valuable.

ACCESS THE FULL REPORT

Download the full report from the National Laboratory Network Web site at <http://ies.ed.gov/ncee/edlabs/projects>.

REFERENCES

- Apthorp, H., & Clark, T. (2007). *Using strategy instruction to help struggling high schoolers understand what they read* (Issues & Answers Report, REL 2007–No. 038). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Central. Retrieved from <http://ies.ed.gov/ncee/edlabs>
- Balfanz, R., McPartland, J. M., & Shaw, A. (2002). *Re-conceptualizing extra help for high school students in a high standards era*. Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University.
- Fuchs, L., Fuchs, D., & Kazdan, S. (1999). Effects of peer-assisted learning strategies on high school students with serious reading problems. *Remedial and Special Education, 20*(5), 309-318.
- Gersten, R., Fuchs, L.S., Williams, J.P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71*, 279-320.
- Langer, J.A. (1999). *Beating the odds: Teaching middle and high school students to read and write well*. Albany, NY: University at Albany, SUNY. Retrieved February 16, 2001, from <http://cela.albany.edu/eie2/main.html>
- Mastropieri, M. A., Scruggs, T. E., Blakken, J.P., & Whedon, C. (1996). Reading comprehension: A synthesis of research in learning disabilities. *Advances in Learning and Behavioral Disabilities, 10B*, 201-227.
- Mastropieri, M. A., Scruggs, T. E., Spencer, V., & Fontana, J. (2003). Promoting success in high school world history: Peer tutoring versus guided notes. *Learning Disabilities Research and Practice, 18*(1), 52–65.
- National Association of Secondary School Principals (2005). *Creating a culture of literacy: A guide for middle and high school principals*. Reston, VA: NASSP.
- National Council of Teachers of English. (2007). *Adolescent Literacy: A Policy Research Brief*. Urbana, IL. Retrieved October 19, 2007, from <http://www.ncte.org/library/files/Publications/Newspaper/Chron0907ResearchBrief.pdf>
- Neild, R. C., & Balfanz, R. (2006). An extreme degree of difficulty: The educational demographics of urban neighborhood high schools. *Journal of Education for Students Placed at Risk, 11*(2), 123–141.
- Trabasso, T. & Bouchard, E. (2002). Teaching readers how to comprehend text strategically. In Cathy Collins Block and Michael Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 176 – 200). New York: The Guilford Press.
- What Works Clearinghouse. (2006, September). *Evidence standards for reviewing studies*. Retrieved from <http://whatworks.ed.gov/reviewprocess/standards.html>

REL Central, administered by McREL, is one of 10 regional educational laboratories funded by the U.S. Department of Education's Institute of Education Sciences. Its mission is to provide educators in the Central Region (Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming) with high-quality, scientifically valid education research; training and technical assistance; and dissemination.



Mid-continent Research for Education and Learning
4601 DTC Blvd., #500
Denver, CO 80237
Phone: 303-337-0990 • Fax: 303-337-3005
www.mcrel.org • relcentral@mcrel.org

This report was prepared for the Institute of Education Sciences under Contract #ED-06-CO-0023 by Regional Educational Laboratory Central, administered by Mid-continent Research for Education and Learning. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government. This publication is in the public domain. Authorization to reproduce in whole or in part for educational purposes is granted.