

## REL Southwest Ask A REL Response

Literacy

June 2018

### Question:

*Provide information on the most effective reading interventions for secondary students.*

### Response:

Thank you for the question you submitted to our REL Reference Desk. We have prepared the following memo with research references to help answer your question. For each reference, we provide an abstract, excerpt, or summary written by the study's author or publisher. Following an established Regional Educational Laboratory (REL) Southwest research protocol, we conducted a search for research reports as well as descriptive study articles on the most effective reading interventions for secondary students. The sources included ERIC and other federally funded databases and organizations, research institutions, academic research databases, and general Internet search engines (For details, please see the Methods section at the end of this memo.)

We have not evaluated the quality of references and the resources provided in this response. We offer them only for your reference. Also, we searched the references in the response from the most commonly used resources of research, but they are not comprehensive and other relevant references and resources may exist. References provided are listed in alphabetical order, not necessarily in order of relevance. We do not include sources that are not freely available to the requestor.

### Research References

Connor, C. M., Alberto, P. A., Compton, D. L., & O'Connor, R. E. (2014). Improving reading outcomes for students with or at risk for reading disabilities: A synthesis of the contributions from the Institute of Education Sciences Research Centers. NCSER 2014-3000. *National Center for Special Education Research*. <https://eric.ed.gov/?id=ED544759>

*From the ERIC abstract:* "Reading difficulties and disabilities present serious and potentially lifelong challenges. Children who do not read well are more likely to be retained a grade in school, drop out of high school, become a teen parent, or enter the juvenile justice system. Building on the extant research and seminal studies, including the National Reading Panel and the National Early Literacy Panel reports, research supported

by the Institute of Education Sciences (IES) has expanded understanding of ways to identify and help children who are at risk for reading disabilities. This body of work has also contributed to the identification of critical component skills that support proficient reading (e.g., phonological awareness, word knowledge, working memory), better ways to assess these skills, and more effective interventions for children at risk of developing reading difficulties, including children who are deaf or have intellectual disabilities. Research funded by IES has investigated ways to bring these efficacious interventions into our nation's classrooms by developing and evaluating professional development training that increases teachers' knowledge about literacy and how to teach reading effectively to all students, including students who are struggling to learn how to read. This is important because the most recent National Assessment of Educational Progress reports that by fourth grade, one-third of our students are failing to attain basic reading skills. In this synthesis, the panel convened by IES, connects the building blocks of assessment, cognitive and linguistic components of reading, effective interventions, and teacher professional development to show how IES-funded research is contributing to solutions for improving reading and preventing reading difficulties. Based on the initial reading of the papers, and following an initial in-person meeting to discuss the articles that were read, the panel organized the contributions into four broad categories with component research questions. They are: (1) Assessment: What has been learned about effective identification and assessment of students who have or are at risk for reading difficulties or disabilities? (2) Basic Cognitive and Linguistic Processes: What are the basic cognitive and linguistic processes that support successful reading and how can these skills be improved for students who have or who are at risk for reading disabilities? (3) Intervention: How can reading instruction be more effective for students who have or are at risk for developing reading disabilities? How can reading be taught to students with low incidence disabilities? (4) Professional Development: How can research-based instructional practices be implemented in the classroom? These categories emerged directly from the articles that the panel members read and they reflect the areas the panel believes that IES-supported research has made contributions to in advancing the understanding of how to improve reading outcomes for students with or at risk for reading disabilities. For each question, the panel synthesized the available research findings and highlighted key contributions. The panel was given the task of looking across the range of projects that IES has funded in this area to determine what has been learned, where progress has been made as a result of IES funding, and to provide suggestions for further research in improving reading skills of children with or at risk for reading disabilities. In reading this synthesis, readers should remember that it is not intended to be an overview of the existing research on improving reading for children with or at risk for reading disabilities. Panel members were only asked to review those published articles or book chapters that had emerged from IES-funded projects. Specifically, the panel was asked to review articles from peer-reviewed journals and book chapters from funded projects that were published or in press as of December 2011 (thus some articles that were in press in 2011 will have published dates in 2012 or 2013). Thus, there is a great deal of ongoing research that is not represented in this synthesis because some grants are not yet at the stage in the research process where findings are in and summarized for publication. Note also that reports of IES-funded research that have not

been subjected to the peer-review process in publication are not included in this review. Appendix A lists the projects and publications that were reviewed for this synthesis.”

Fancsali, C., Abe, Y., & Pyatigorsky, M. (2016). Developing content-area academic literacy: A randomized control trial of the reading apprenticeship Improving Secondary Education (RAISE) project. *Society for Research on Educational Effectiveness*. <https://eric.ed.gov/?id=ED566986>

*From the ERIC abstract:* “Nationally, two-thirds of high school students are unable to read and comprehend complex academic materials, think critically about texts, and synthesize information from multiple sources, or communicate what they have learned. Without a substantial change in their academic literacy, U.S. high school students face continued academic problems in high school and college because they are unable to handle the quantity and complexity of assigned reading (ACT, 2012). The Reading Apprenticeship instructional framework was developed two decades ago to help teachers provide the literacy support students need to be successful readers in the content areas. It has since reached over 100,000 teachers in schools across the country, at the middle school, high school and college levels. In 2010, the program developers received a "Validation" grant from the Department of Education's Investing in Innovation Fund (i3) competition to scale-up and conduct a randomized controlled trial of the intervention through a project called Reading Apprenticeship Improving Secondary Success (RAISE). This study explored implementation questions as well as mediating impact and longer-term impact on student achievement. Questions included: (1) To what extent is RAISE implemented in a way that is consistent with the program model and underlying theory of action?; (2) What are the effects of RAISE on teacher practices and teacher attitudes?; (3) What are the effects of implementing RAISE on student engagement, and reading attitudes and behaviors?; and (4) What are the effects of implementing RAISE on student literacy achievement? The study took place in 42 high schools in California and Pennsylvania. Professional development was provided to teachers in a central location within each state. Teachers were offered on-site support through monthly meetings led by teacher leaders. The primary sources of data collected and presented in this paper are student record data collected from the district, monthly teacher surveys collected over three years (27 total), student surveys collected at the end of each implementation year and an on-line student literacy assessment developed and collected by the Educational Testing Service (ETS) at the end of each implementation year. Findings from this study demonstrate the success of the RAISE project in providing teachers with training and support at scale to help them change their instructional practices in order to foster metacognitive inquiry and support comprehension, particularly in science. These findings are consistent with positive findings from other studies of Reading Apprenticeship. The primarily positive, yet not statistically significant results for the full sample indicate that the study's sample size may not have been large enough to detect a modest size impact. The results from this study point to several areas in need of further investigation. Specifically, the differences in impact by subject area and state need to be better understood. 5 exhibits are appended.”

Kim, J., Hemphill, L., Toryer, M., Jones, S., LaRusso, M., Kim, H.Y., Donovan, S., & Snow, C. (2016). The experimental effects of the Strategic Adolescent Reading Intervention (STARI) on a scenarios-based reading comprehension assessment. *Society for Research on Educational Effectiveness*. <https://eric.ed.gov/?id=ED567033>

*From the ERIC abstract:* “Nearly one-quarter of U.S. eighth graders score below basic on national assessments of reading (NCES, 2013) and are poorly equipped for the reading demands of secondary school. Struggling adolescent readers cannot summarize a simple passage, use context to determine word meanings, and have difficulties making text-based inferences. In addition, poor fluency limits many struggling readers' ability to process text efficiently, compromising basic and inferential comprehension (Cantrell et al., 2013; Flynn et al., 2012). This study presents intention-to-treat impacts from a randomized clinical trial of the Strategic Adolescent Reading Intervention (STARI) on a scenarios-based assessment of reading comprehension. STARI is a multicomponent reading intervention for struggling middle school readers and is implemented as a year-long supplemental reading program for middle school students who score below proficient on state literacy assessments. Building from a multiple-component view of reading development, STARI incorporates strands on decoding, fluency, vocabulary, and comprehension, and provides multiple supports for struggling adolescent readers. For example, teachers provide explicit instruction on strategies for decoding multisyllabic words, focused on identifying more complex letter combinations, syllable patterns, and morphological units such as base words and affixes. Instructional activities that target these skills have shown success in improving older struggling readers' word recognition and fluency (Edmonds et al., 2009). In previous work, positive intention-to-treat effects on multiple domains of reading, including word reading, morphological awareness, and efficiency of basic reading were found. This study extends prior work by examining effects on a Global, Integrated Scenario-Based Assessment (GISA) that is designed to assess a broader conception of reading ability (Sabatini et al., 2014). This impact analysis extends prior work by showing that a multi-component Tier-2 intervention for struggling adolescent readers can improve a range of reading outcomes as well as a global, integrated scenario-based assessment of reading.”

Roberts, G., Wexler, J., Vaughn, S., Fall, A. M., Pyle, N., & Williams, J. (2012). Efficacy of an individualized reading intervention with secondary students. *Society for Research on Educational Effectiveness*. <https://eric.ed.gov/?id=ED530175>

*From the ERIC abstract:* “The study evaluates the efficacy of an intensive, reading intervention, a dropout prevention intervention, and an intensive, reading intervention plus dropout prevention on high school students' reading achievement and rates of dropout/school engagement. This paper focuses on the reading intervention and on reading outcomes. Data on the drop out intervention continues for the next 2 years. The research questions include: (1) What is the efficacy of an intensive reading intervention, with adolescent struggling readers compared with a well-documented, school-implemented comparison group on post-test reading performance? and (2) What is the moderating effect, if any, of primary language status and special education status? (Contains 3 tables.)”

Vaughn, S., & Wanzek, J. (2014). Intensive interventions in reading for students with reading disabilities: Meaningful impacts. *Learning Disabilities Research & Practice, 29*(2), 46-53.  
<https://eric.ed.gov/?id=ED557070>

*From the ERIC abstract:* “We use three data sources to build a rationale for why intensive interventions are necessary for students with pervasive reading disabilities: current data on the performance of students with disabilities on reading achievement measures over time, observation studies on students with reading disabilities in general and special education classrooms, and findings from intensive intervention studies for students with reading disabilities. Results of these data sources indicate that students with disabilities are not making progress in reading at the same rate as students without disabilities, reading instruction for students with reading disabilities is comprised of excessive amounts of low level tasks, and findings from intensive intervention studies suggest positive impacts for students with reading disabilities. We argue that students with reading disabilities require ongoing intensive interventions that are likely to require schools to change the contexts and practices for these students. [This paper was published in "Learning Disabilities Research & Practice" (EJ1029988).]”

What Works Clearinghouse. (2016). Read 180®. What Works Clearinghouse Intervention Report. Washington, DC: Institute of Education Sciences, U.S. Department of Education.  
<https://eric.ed.gov/?id=ED570964>

*From the ERIC abstract:* "READ 180®" is a reading program designed for struggling readers who are reading 2 or more years below grade level. It combines online and direct instruction, student assessment, and teacher professional development. "READ 180®" is delivered in 90-minute sessions that include whole-group instruction, three small-group rotations, and whole-class wrap-up. Small-group rotations include individualized instruction using an adaptive computer application, small-group instruction, and independent reading. "READ 180®" is designed for students in elementary through high school. "READ 180®" was found to have positive effects on comprehension and general literacy achievement, potentially positive effects on reading fluency, and no discernible effects on alphabets for adolescent readers. The What Works Clearinghouse (WWC) identified nine studies of "READ 180®" that both fall within the scope of the Adolescent Literacy topic area and meet WWC group design standards. Three studies meet WWC group design standards without reservations, and six studies meet WWC group design standards with reservations. Together, these studies included 8,755 adolescent readers in more than 66 schools in 15 school districts and 10 states. The WWC considers the extent of evidence for "READ 180®" on the reading achievement of adolescent readers to be medium to large for four outcomes--comprehension, general literacy achievement, reading fluency, and alphabets. The following are appended: (1) Research details for Fitzgerald and Hartry (2008); (2) Research details for Kim et al. (2010); (3) Research details for Swanlund et al. (2012); (4) Research details for Interactive, Inc. (2002); (5) Research details for Meisch et al. (2011); (6) Research details for Sprague et al. (2012); (7) Research details for White et al. (2006); (8) Research details for White et al. (2005); (9) Research details for Yuchak (2013); (10) Outcome measures for each domain; (11) Findings included in the rating for the comprehension domain; (12) Findings included in

the rating for the general literacy achievement domain; (13) Findings included in the rating for the reading fluency domain; (14) Findings included in the rating for the alphabets domain; (15) Description of supplemental findings for the comprehension domain; (16) Description of supplemental findings for the general literacy achievement domain; (17) Description of supplemental findings for the reading fluency domain; and (18) Description of supplemental findings for the alphabets domain.”

What Works Clearinghouse. (2013). WWC review of the report: Same-Language-Subtitling (SLS): Using subtitled music video for reading growth. Washington, DC: Institute of Education Sciences, U.S. Department of Education. <https://eric.ed.gov/?id=ED538460>

*From the ERIC abstract:* “This randomized controlled trial examined the impacts of "Same-Language-Subtitling" ("SLS"), a karaoke-style subtitling intervention, on the reading comprehension skills of secondary school students in Kaneohe, Hawaii. Researchers randomly assigned 198 secondary school students with learning disabilities (ages 14 to 19) to either special education classrooms using the "SLS" intervention or comparison classrooms (special or general education). The final study sample consisted of 51 students in the intervention condition and 98 students in the comparison condition. Researchers assessed the effectiveness of "SLS" by comparing the reading comprehension achievement of students in the "SLS" intervention and comparison conditions at the end of the 12-week intervention in June, and again after the summer break in September. The study did not report the statistical significance of the impact of the "SLS" intervention. However, the What Works Clearinghouse (WWC) calculations indicate that students in the "SLS" intervention condition scored significantly higher than students in the comparison condition on the reading comprehension achievement posttests. The research described in this report meets WWC evidence standards without reservations. Appended are: (1) Study details; (2) Outcome measure for the reading comprehension domain; and (3) Study findings for the reading comprehension domain.”

What Works Clearinghouse. (2010). Reading Plus[R]. What Works Clearinghouse Intervention Report. Washington, DC: Institute of Education Sciences, U.S. Department of Education. <https://eric.ed.gov/?id=ED511804>

*From the ERIC abstract:* “Reading Plus[R] is a web-based reading intervention that uses technology to provide individualized scaffolded silent reading practice for students in grade 3 and higher. Reading Plus[R] aims to develop and improve students' silent reading fluency, comprehension, and vocabulary. Reading Plus[R] is designed to adjust the difficulty of the content and duration of reading activities so that students proceed at a pace that corresponds to their reading skill level. The intervention includes differentiated reading activities, computer-based reading assessments, tools to monitor student progress, ongoing implementation support, and supplemental offline activities. One study of Reading Plus[R] that falls within the scope of the Adolescent Literacy review protocol meets What Works Clearinghouse (WWC) evidence standards with reservations. The study included 13,128 students, ranging from grade 5 through grade 9, who attended schools in Miami-Dade County in Florida. Based on one study, the WWC considers the extent of evidence for Reading Plus[R] on adolescent learners to be small for the

comprehension domain. The one study that meets WWC evidence standards with reservations did not examine the effectiveness of Reading Plus[R] on adolescent learners in the alphabetic, reading fluency, or general literacy achievement domains. Reading Plus[R] was found to have potentially positive effects on comprehension for adolescent learners. Appended to this report are: (1) Study characteristics: Reading Plus, 2008; (2) Outcome measure for the comprehension domain; (3) Summary of study findings included in the rating for the comprehension domain; (4) Reading Plus[R] rating for the comprehension domain; and (5) Extent of evidence by domain.”

## Additional Organizations to Consult

National Center on Improving Literacy—<https://improvingliteracy.org/about>

*From the website:* “The National Center on Improving Literacy (NCIL) is a partnership among literacy experts, university researchers, and technical assistance providers, with funding from the United States Department of Education.

Our Mission is to increase access to, and use of, evidence-based approaches to screen, identify, and teach students with literacy-related disabilities, including dyslexia.”

Reading Rockets—<http://www.readingrockets.org/about>

*From the website:* “Reading Rockets is a national multimedia literacy initiative offering information and resources on how young kids learn to read, why so many struggle, and how caring adults can help.

We bring the best research-based strategies to teachers, parents, administrators, librarians, childcare providers, and anyone else involved in helping a young child become a strong, confident reader. Our goal is to bring the reading research to life — to spread the word about reading instruction and to present "what works" in a way that parents and educators can understand and use.”

What Works Clearinghouse—<http://ies.ed.gov/ncee/wwc/>

*From the website:* “The What Works Clearinghouse (WWC) was established in 2002 as an initiative of the Institute for Education Sciences (IES) at the U.S. Department of Education. The WWC is administered by the National Center for Education Evaluation within the IES. The goal of the WWC is to be a resource for informed educational decision-making. To reach this goal, the WWC identifies studies that provide credible and reliable evidence of the effectiveness of a given practice, program, or policy (referred to as “interventions”) and disseminates summary information and reports on the WWC website.”

## Methods

### Keywords and Search Strings

The following keywords and search strings were used to search the reference databases and other sources:

- Reading Secondary Intervention
- Reading Secondary Impact
- Literacy Intervention
- Literacy + 6<sup>th</sup> grade + 7<sup>th</sup> grade + 8<sup>th</sup> + 9<sup>th</sup> + 10<sup>th</sup> + 11<sup>th</sup> + 12<sup>th</sup>
- Reading Intervention + 6<sup>th</sup> grade + 7<sup>th</sup> grade + 8<sup>th</sup> + 9<sup>th</sup> + 10<sup>th</sup> + 11<sup>th</sup> + 12<sup>th</sup>

### Databases and Resources

We searched ERIC for relevant, peer-reviewed research references. ERIC is a free online library of more than 1.6 million citations of education research sponsored by the Institute of Education Sciences (IES). Additionally, we searched Google Scholar and PsychInfo.

### Reference Search and Selection Criteria

When we were searching and reviewing resources, we considered the following criteria:

- *Date of the publication:* References and resources published from 2003 to present, were include in the search and review.
- *Search priorities of reference sources:* Search priority is given to study reports, briefs, and other documents that are published and/or reviewed by IES and other federal or federally funded organizations, academic databases, including ERIC, EBSCO databases, JSTOR database, PsychInfo, PsychArticle, and Google Scholar.
- *Methodology:* The following methodological priorities/considerations were given in the review and selection of the references: (a) study types—randomized control trials, quasi-experiments, surveys, descriptive data analyses, literature reviews, policy briefs, and so forth, generally in this order; (b) target population, samples (representativeness of the target population, sample size, volunteered or randomly selected, and so forth), study duration, and so forth; and (c) limitations, generalizability of the findings and conclusions, and so forth.

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This memorandum is one in a series of quick-turnaround responses to specific questions posed by stakeholders in the Southwest Region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), which is served by the Regional Educational Laboratory (REL) Southwest at AIR. This memorandum was prepared by REL Southwest under a contract with the U.S. Department of Education’s Institute of Education Sciences (IES), Contract ED-IES-91990018C0002, administered by AIR. Its content does not

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