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Thank you for your request to our REL Reference Desk regarding evidence-based information about literacy interventions and tests. Ask A REL is a collaborative reference desk service provided by the ten regional educational laboratories (REL) that, by design, functions much in the same way as a technical reference library. It provides references, referrals, and brief responses in the form of citations on research based education questions.

The information below represents the most rigorous research available. Researchers consider the type of methodology and give priority to research reports that employ well described and thorough methods. The resources were also selected based on the date of the publication with a preference for research from the last ten years. Additional criteria for inclusion include the source and funder of the resource.

**Question:** *What methodology is used to strengthen literacy interventions and improve literacy tests?*

### **Search Process**

**Key words and search strings used in the search:** *literacy intervention AND literacy test AND research methodology; methodology AND literacy interventions OR literacy tests*

### **Search databases and websites:**

1. ERIC: <http://www.eric.ed.gov/>
2. JSTOR: <http://www.jstor.org/action/showAdvancedSearch>
3. Google Scholar: [www.google.com/scholar](http://www.google.com/scholar)
4. Institute of Education Sciences (IES) Resources: <http://ies.ed.gov>
5. What Works Clearinghouse: <http://ies.ed.gov/ncee/wwc/>

**Sample Citations Retrieved** (NOTE: Abstracts and executive summaries are copied directly from the reports when possible to ensure accuracy):

Al Otaiba, S. & Fuchs, D. (2002). *Characteristics of children who are unresponsive to early literacy intervention: A review of the literature*. Remedial and Special Education, 23(5), 300-316. doi: 10.1177/07419325020230050501

**Abstract/Summary:** A review of the literature on young children unresponsive to generally effective literacy instruction focuses on 23 studies. It found a majority of unresponsive students had phonological awareness deficits. Also common were phonological retrieval or encoding deficits, low verbal ability, behavior problems, and developmental delays. Methodological problems in comparing students across studies are noted.

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Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., and Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A Practice Guide* (NCEE #2008-4027). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc>.

**Abstract/Summary:** This guide presents strategies that classroom teachers and specialists can use to increase the reading ability of adolescent students. The recommendations aim to help students gain more from their reading tasks, improve their motivation for and engagement in the learning process, and assist struggling readers who may need intensive and individualized attention.

Kyriakides, L. (2004). Investigating validity from teachers' perspectives through their engagement in large-scale assessment: The emergent literacy baseline assessment project. *Assessment in Education Principles Policy and Practice*, 11(2), 143-165. doi: 10.1080/0969594042000259466

**Abstract/Summary:** This paper argues for an expanded conception of test validity, in which teachers, as end-users of tests, contribute a distinctive perspective on validity, referred to as inferential validity. It also offers a methodology that could be adopted in order to subject this dimension of validity to scrutiny. An investigation conducted into the meanings constructed by teachers of a literacy test, the Emergent Literacy Baseline Assessment (ELBA), is reported to illustrate the methodology. In the first section of the paper, current conceptions of validity are discussed. It is argued that the validation process for tests should include the clarification and justification of the interpretations and uses of observed scores. This argument is illustrated from the methodology for investigating the validity of the ELBA. Self-assessment questionnaires and focus-group interviews provided data on teachers' views about the validity of the ELBA. Arguments in favour of investigating the validity of large-scale tests by taking into account teachers' perspectives are provided.

Ong-Dean, C., Hofstetter, C. H., & Strick, B. R. (2011). Challenges and dilemmas in implementing random assignment in educational research. *American Journal of Evaluation*, 32(1), 29-49. doi: 10.1177/1098214010376532

**Abstract/Summary:** In the contentious debate over the use of randomized clinical trials (RCTs) in education research, little attention has been given to how methodological issues arise and/or are resolved in the implementation of random assignment. Following a review of the methodological-theoretical literature on RCTs and alternative research designs, this article analyzes qualitative and quantitative data on three years of random assignment in a multi-site literacy intervention for adolescents. Practical lessons are drawn about how researcher practices and learning by school staff contributed to random assignment compliance. Consideration of

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challenges encountered in implementing random assignment suggests that 1) researcher communication with program staff improves compliance, but may not overcome the need for learning through experience; 2) in keeping with arguments in favor of random assignment-based research, random assignment may control for diverse selection processes that would undermine valid treatment-control comparisons in some non-RCT research designs; and 3) in keeping with arguments against random assignment-based research, random assignment may lead to samples dissimilar to target populations. In concluding, the broader limitations of research that focus on a priori causes and quantifiable effects are noted.

Scammacca, N., Roberts, G., Vaughn, S., Edmonds, M., Wexler, J., Reutebuch, C. K., & Torgesen, J. K. (2007). *Interventions for adolescent struggling readers: A meta-analysis with implications for practice*. Portsmouth, NH: RMC Research Corporation, Center on Instruction.

**Abstract/Summary:** This meta-analysis offers decision-makers research-based guidance for intervening with adolescent struggling readers. The authors outline major implications for practice: (1) Adolescence is not too late to intervene. Interventions do benefit older students; (2) Older students with reading difficulties benefit from interventions focused at both the word and the text level; (3) Older students with reading difficulties benefit from improved knowledge of word meanings and concepts; (4) Word-study interventions are appropriate for older students struggling at the word level; (5) Teachers can provide interventions that are associated with positive effects; (6) Teaching comprehension strategies to older students with reading difficulties is beneficial; (7) Older readers' average gains in reading comprehension are somewhat smaller than those in other reading and reading-related areas studied; (8) Older students with learning disabilities (LD) benefit from reading intervention when it is appropriately focused; and (9) To learn more about instructional conditions that could close the reading gap for struggling readers, individuals will need studies that provide instruction over longer periods of time and assess outcomes with measures more like those schools use to monitor reading progress of all students. This report summarizes aspects of recent research on reading instruction for adolescent struggling readers. It both synthesizes research findings to determine the relative effectiveness of interventions for struggling older readers and outlines the implications of these findings for practice. Its purpose is to advance the knowledge of technical assistance providers working with state departments of education and local education agencies concerning reading-related issues for students with reading difficulties and learning disabilities (LD). While the authors' methods and general findings are described, they are presented in terms of their impact on practice and policy. Specific suggestions for implementing these and other research findings are provided in an accompanying practice brief (ED521836). This report is intended primarily for technical assistance providers at Regional Comprehensive Centers for their use in crafting evidence-based guidance for states and local educational agencies. (Contains 5 tables and 1 footnote and lists 14 resources.) [For related reports, see "Effective Instruction for Adolescent Struggling Readers: A Practice Brief" (ED521836) and "Effective Instruction for Adolescent Struggling Readers:

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Professional Development Module. Second Edition. Facilitator's Guide."

Slavin, R. E., Cheung, A., Groff, C., & Lake, C. (2008). Effective reading programs for middle and high schools: A best-evidence synthesis. *Reading Research Quarterly*, 43(3), 290-322. doi: 10.1598/RRQ.43.3.4

**Abstract/Summary:** This article systematically reviews research on the achievement outcomes of four types of approaches to improving the reading of middle and high school students: (1) reading curricula; (2) mixed-method models (methods that combine large-and small-group instruction with computer activities); (3) computer-assisted instruction; and (4) instructional-process programs (methods that focus on providing teachers with extensive professional development to implement specific instructional methods). Criteria for inclusion in the study were use of randomized or matched control groups, a study duration of at least 12 weeks, and valid achievement measures that were independent of the experimental treatments. A total of 33 studies met these criteria. The review concludes that programs designed to change daily teaching practices have substantially greater research support than those focused on curriculum or technology alone. Positive achievement effects were found for instructional-process programs, especially for those involving cooperative learning, and for mixed-method programs. The effective approaches provided extensive professional development and significantly affected teaching practices. In contrast, no studies of reading curricula met the inclusion criteria, and the effects of supplementary computer-assisted instruction were small.

### Referrals

#### **Organizations:**

- International Reading Association: <http://www.reading.org>
- Reading is Fundamental: <http://www.rif.org>
- All About Adolescent Literacy: <http://www.adlit.org>
- The Meadows Center for Preventing Educational Risk: <http://www.meadowscenter.org>
- Adolescent Literacy Collaboratory at Brown: [http://www.alliance.brown.edu/collaboratory/collab\\_admin.php](http://www.alliance.brown.edu/collaboratory/collab_admin.php)
- The IRIS Center: <http://iris.peabody.vanderbilt.edu>
- Council of Chief State School Officers: [http://www.ccsso.org/resources/digital\\_resources/adolescent\\_literacy\\_toolkit.html](http://www.ccsso.org/resources/digital_resources/adolescent_literacy_toolkit.html)

#### **Federally Funded Resources:**

- Institute of Education Sciences (IES), public search engine available at: <http://ies.ed.gov/pubsearch/>
- What Works Clearinghouse: <http://ies.ed.gov/ncee/wwc/>
- Florida Center for Reading Research: <http://www.fcrr.org>



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- Center on Instruction: <http://www.centeroninstructon.org>
  - National Center on Response to Intervention: <http://www.rti4success.org>

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